MONTECITO RANCH

APPENDIX Q

MODELING REQUIRED FOR POTENTIAL EXTENSION OF SA 330

for the

DRAFT ENVIRONMENTAL IMPACT REPORT SP01-001; TM 5250RPL⁶; P04-045; LOG NO. 01-09-013; SCH NO. 2002021132

May 2008

Information for the Reader

The County Department of Public Works has requested that an analysis of the potential future SA 330 extension between Montecito Road and Main Street (SR 67) be completed. Although this extension is not proposed as part of the Montecito Ranch Project, information regarding anticipated design and environmental effects are provided within the EIR for review and comment in Section 5.8.6 of the EIR. Interested readers are referred to page 5-25 of this EIR for a detailed analysis of the potential future SA 330 extension.

This appendix provides technical noise and drainage modeling required for the analysis of the potential future SA 330 extension, as well as stormwater management best management practices and requirements. For the analyses on Resource Protection Ordinance compliance; biological, cultural, and agricultural resources; and aesthetics, readers are referred to the text in Section 5.8.6 of the EIR.

SA 330 EXTENSION:

Noise Information

APPENDIX C

NOISE CONTOUR MODEL INPUTS AND CALCULATIONS (ROADWAY DESIGN OPTION 1)

Scenario: Existing Conditions

Road Name: SR-78

Road Segment: Ash St. - Haverford Rd.

Project Name: Montecito Ranch

SITE SPECIFIC II	NPUT DATA	NOISE MODEL INPUTS						
Highway Data		S	ite Con	ditions (H	ard = 10, Se	oft = 15)		
Average Daily Traffic (Adt):	9,700 vehicles	s			Autos:	10		
Peak Hour Percentage:	10%		Me	dium Truci	ks (2 Axles):	10		
Peak Hour Volume:	970 vehicles	s	He	avy Trucks	s (3+ Axles):	10		
Vehicle Speed:	40 mph	1.	'ehicle l	Miv				
Near/Far Lane Distance:	12 feet			icleType	Day	Evening	Night	Daily
Site Data			V C///		tos: 80.0%		13.0%	
W. W.			1/1/	edium Truc			13.0%	4.00%
Barrier Height:	0.0 feet			Heavy Truc			13.0%	2.00%
Barrier Type (0-Wall, 1-Berm).	0.0		,	leavy ITuc	,ns. 00.0 /	7.070	13.070	2.00 /0
Centerline Dist. to Barrier.	100.0 feet	۸	loise Sc	ource Elev	ations (in f	eet)		
Centerline Dist. to Observer:	110.0 feet			Autos:	0.000			
Barrier Distance to Observer:	10.0 feet		Mediui	m Trucks:	2.297			
Observer Height (Above Pad):	5.0 feet			y Trucks:	8.006	Grade Ad	liustment	: 0.0
Pad Elevation:	0.0 feet						,	
Road Elevation:	0.0 feet	L	ane Equ	uivalent D	istance (in	feet)		
Road Grade:	0.0%			Autos:	109.950			
Left View:	-90.0 degree	es	Mediui	m Trucks:	109.869			
Right View:	90.0 degree	es	Heav	y Trucks:	109.877			
FHWA Noise Model Calculation	ns			**************************************				
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos: 66.51	-1.73	-3.49		0.00	-1.04	0.0	000	0.000
Medium Trucks: 77.72	-15.44	-3.49		0.00	-1.15	0.0	000	0.000
Heavy Trucks: 82.99	-18.45	-3.49		0.00	-1.43	0.0	000	0.000
Unmitigated Noise Levels (with	out Topo and	barrier attenu	ıation)					
VehicleType Leq Peak Hot	ur Leq Day	Leq Ev	enina	Leg Ni	aht	Ldn	CI	VEL

Ullillingated Nois	e Leveis (Williout	TOPO and Dairi	ei allenualion)			1
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.3	59.5	55.0	52.9	60.9	61.1
Medium Trucks:	58.8	57.0	52.5	50.4	58.4	58.6
Heavy Trucks:	61.1	59.3	54.7	52.7	60.6	60.9
Vehicle Noise:	65.3	63.5	59.0	56.9	64.9	65.1

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	34	106	336	1,063
CNEL:	36	114	360	1,137

Scenario: Existing Conditions

Road Name: SR-78

Road Segment: Ash St. - Olive St.

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE	SPECIFIC IN	PUT DATA		NOISE MODEL INPUTS							
Highway Data				Site Cond	ditions (Ha	rd = 10, Sc	oft = 15)				
Average Daily	Traffic (Adt): 1	0,200 vehicles	S			Autos:	10				
Peak Hou	r Percentage:	10%		Med	dium Trucks	(2 Axles):	10				
Peak l	Hour Volume:	1,020 vehicles	S	Hea	avy Trucks ('3+ Axles):	10				
Ve	ehicle Speed:	40 mph		Vehicle N							
Near/Far La	ane Distance:	12 feet			cleType	Day	Evening	Night	Daily		
Site Data				Vern	Auto			13.0%	94.00%		
				Me	dium Truck			13.0%	4.00%		
	arrier Height:	0.0 feet			leavy Truck			13.0%	2.00%		
Barrier Type (0-V	•	0.0			cavy mon			10.070	2.007		
	ist. to Barrier:	100.0 feet		Noise Source Elevations (in feet)							
Centerline Dist.		110.0 feet			Autos:	0.000					
Barrier Distance		10.0 feet		Mediun	n Trucks:	2.297					
Observer Height	(Above Pau). Pad Elevation:	5.0 feet 0.0 feet		Heav	y Trucks:	8.006	Grade Ad	justment.	0.0		
	ad Elevation: ad Elevation:	0.0 feet		I ane For	ivalent Dis	tance (in	feet)				
	Road Grade:	0.0 feet 0.0%		zano zqu		109.950					
	Left View:	-90.0 degree	26	Mediun		109.869					
	Right View:	90.0 degree				109.877					
	, light view.	oo.o dogree	,		, , , , , , , , , , , , , , , , , , , ,						
FHWA Noise Mod	lel Calculations	1									
VehicleType		Traffic Flow	Distance		Road F		Barrier Att	en Ber	m Atten		
Autos:	66.51	-1.51	-3	.49	0.00	-1.04	0.0	000	0.00		
Medium Trucks:		-15.22		.49	0.00	-1.15		000	0.00		
Heavy Trucks:	82.99	-18.23	-3	.49	0.00	-1.43	0.0	000	0.00		
Unmitigated Nois	e Levels (witho	ut Topo and	barrier att	enuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq	Evening	Leq Nigh	nt	Ldn	CI	VEL		
Autos:	61.5	5 :	59.8	55.2		53.1	61.1	1	61.4		
Medium Trucks:	59.0) :	57.2	52.7		50.6	58.6	3	58.9		
Heavy Trucks:	61.3	3	59.5	55.0		52.9	60.8	3	61.		

63.7

Ldn:

CNEL:

59.2

70 dBA

35

38

57.1

65 dBA

112

120

65.1

60 dBA

353

378

65.4

55 dBA

1,118

1,196

65.5

Centerline Distance to Noise Contour (in feet)

Vehicle Noise:

Scenario: Existing Conditions

Road Name: SR-78

Road Segment: Olive St. - Main St. (SR-67)

Project Name: Montecito Ranch

SITE	SPECIFIC IN	IPUT DATA		NOISE MODEL INPUTS						
Highway Data			S	ite Conditions	(Hard = 10, Se	oft = 15)				
Peak H Ve	Traffic (Adt): Percentage: lour Volume: hicle Speed: ne Distance:	10,700 vehicles 10% 1,070 vehicles 40 mph 12 feet	3		Autos: ucks (2 Axles). cks (3+ Axles). Day	: 10	Night	Daily		
Site Data					Autos: 80.0%		13.0%			
Baı Barrier Type (0-W	r rier Height: /all, 1-Berm):	0.0 feet 0.0		Medium Ti Heavy Ti			13.0% 13.0%	4.00% 2.00%		
Centerline Dist. to Barrier: 100.0 feet Centerline Dist. to Observer: 110.0 feet Barrier Distance to Observer: 10.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees			L.	Noise Source Elevations (in feet) Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0 Lane Equivalent Distance (in feet) Autos: 109.950 Medium Trucks: 109.869 Heavy Trucks: 109.877						
FHWA Noise Mode	el Calculation	S								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	en Ber	m Atten		
Autos:	66.51	-1.30	-3.49	0.00	-1.04	0.0	00	0.000		
Medium Trucks:	77.72	-15.01	-3.49	0.00	-1.15	0.0	00	0.000		
Heavy Trucks:	82.99	-18.02	-3.49	0.00	-1.43	0.0	00	0.000		

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.7	60.0	55.4	53.3	61.3	61.6
Medium Trucks:	59.2	57.5	52.9	50.8	58.8	59.1
Heavy Trucks:	61.5	59.7	55.2	53.1	61.0	61.3
Vehicle Noise:	65.7	64.0	59.4	57.3	65.3	65.6

Centerline Distance to Noise Contour (in feet)											
	70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:	37	117	371	1,173							
CNEL:	40	125	397	1,254							

Scenario: Existing Conditions

Road Name: 10th St.

Project Name: Montecito Ranch

Job Number: 4568

Analyst: A. Stalker Road Segment: Main St. (SR-67) - H St.

SITE	SPECIFIC IN	IPUT DATA			IOISE MODI	EL INPUTS					
Highway Data				Site Conditions	(Hard = 10, S	oft = 15)					
Peak F Vé	Traffic (Adt): Percentage: Hour Volume: Phicle Speed: The Distance:	7,000 vehicles 10% 700 vehicles 40 mph 12 feet	5		Autos ucks (2 Axles) cks (3+ Axles) Day): 10): 10	Night	Daily			
Site Data	10.0			,	Autos: 80.09	% 7.0%	13.0%	95.00%			
Barrier Type (0-M Centerline Di Centerline Dist. Barrier Distance Observer Height P	Barrier Height: 0.0 feet Carrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 100.0 feet Centerline Dist. to Observer: 110.0 feet Barrier Distance to Observer: 10.0 feet Cbserver Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Medium Trucks: 80.0% 7.0% 13.0% 4 Heavy Trucks: 80.0% 7.0% 13.0% 1 Noise Source Elevations (in feet) Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0. Lane Equivalent Distance (in feet) Autos: 109.950 Medium Trucks: 109.869 Heavy Trucks: 109.877						
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte		m Atten			
Autos:		-3.10	-3.4		-1.04			0.000			
Medium Trucks:	77.72	-16.85	-3.4		-1.15			0.000			
Heavy Trucks:	82.99	-22.87	-3.4	9 0.00	-1.43	0.00	00	0.000			
Unmitigated Nois	e Levels (with	out Topo and l	barrier atten	uation)							
VehicleType	Lea Peak Hou	ır Leg Dav	Lea F	venina Lea	Night	I dn	C	VFI			

Inmitigated Nois	se Levels (without	Topo and barri	er attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos.	59.9	58.2	53.6	51.5	59.5	59.8
Medium Trucks	57.4	55.6	51.1	49.0	56.9	57.2
Heavy Trucks.	56.6	54.9	50.3	48.2	56.2	56.5
Vehicle Noise	63.0	61.2	56.7	54.6	62.5	62.8

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	63	198	626
CNEL:	21	67	212	669

Scenario: Existing Conditions Road Name: Main St. (SR-78) Road Segment: 7th St. - 3rd St. Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE	SPECIFIC IN	PUT DATA		NOISE MODEL INPUTS							
Highway Data				Site Cor	ditions	(Hard	= 10, Sc	oft = 15)			
Average Daily	Traffic (Adt): 2	3,300 vehicles	3				Autos:	10			
Peak Hour	Percentage.	10%		Me	edium Tr	ucks (2	? Axles):	10			
Peak H	our Volume:	2,330 vehicles	;	He	avy Truc	cks (3+	Axles):	10			
Ve	hicle Speed:	55 mph		Vehicle	Miy						
Near/Far La	ne Distance:	12 feet		VehicleType Day			Evening	Night	Daily		
Site Data						Autos:	80.0%		13.0%	<u> </u>	
	rier Height:	0.0 feet	10-15-0-1	М	edium T	rucks:	80.0%	7.0%	13.0%	4.00%	
Barrier Type (0-W	_	0.0 feet			Heavy Ti	rucks:	80.0%	7.0%	13.0%	2.00%	
Centerline Dis		100.0 feet									
Centerline Dist.		110.0 feet		Noise S			<u>-</u>	et)			
Barrier Distance		10.0 feet			Auto		0.000				
Observer Height (5.0 feet			m Truck		2.297	O	4 4	. 0.0	
• ,	nd Elevation:	0.0 feet		Hea	vy Truck	s: {	3.006	Grade Adj	usimeni	. 0.0	
Roa	nd Elevation:	0.0 feet		Lane Eq	uivalent	t Dista	nce (in	feet)			
I	Road Grade:	0.0%			Auto	s: 109	9.950				
	Left View:	-90.0 degree	s	Mediu	m Truck	s: 109	9.869				
	Right View:	90.0 degree	s	Hea	vy Truck	s: 109	9.877				
FHWA Noise Mode	el Calculations			<u>i</u>							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fres		Barrier Atte	en Ber	m Atten	
Autos:	71.78	0.70	-3	.49	0.00		-1.04	0.0	00	0.000	
Medium Trucks:	82.40	-13.01	-3	.49	0.00		-1.15	0.0		0.000	
Heavy Trucks:	86.40	-16.03	-3	.49	0.00		-1.43	0.0	00	0.000	
Unmitigated Noise			barrier atte	enuation)							
VehicleType	Leq Peak Hour			Evening	l	Night		Ldn	CI	NEL	
Autos:	69.0		67.2	62.7		60		68.5		68.8	
Medium Trucks:	65.9		64.1	59.6		57		65.5		65.8	
Heavy Trucks:	66.9		55.1	60.6		58		66.4		66.7	
Vehicle Noise:	72.2	2 7	70.5	65.9		63	.8	71.8		72.1	

70 dBA

166

178

Ldn:

CNEL:

65 dBA

525

561

60 dBA

1,660

1,775

55 dBA

5,248 5,614

Scenario: Existing Conditions
Road Name: Main St. (SR-67)
Road Segment: 10th St. - Montecito Rd.

Project Name: Montecito Ranch Job Number: 4568

Analyst: A. Stalker

SITE	SPECIFIC IN	PUT DATA			NOISE MODEL INPUTS							
Highway Data					Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt): 2	9,500 vehicle	s				Auto	s: 10				
Peak Hou	Percentage:	10%			Me	dium Truc	ks (2 Axle	s): 10				
Peak I	Hour Volume:	2,950 vehicle	s		Hea	avy Truck	s (3+ Axles	s): 10				
Ve	ehicle Speed:	55 mph		-	/ehicle l	liv						
Near/Far La	ane Distance:	12 feet				cleType	Day	Evening	Nigh	t Daily		
Site Data					V C/ II		tos: 80.0					
	vrior Hojahtı	0.0 feet			Ме	edium Tru						
ва Barrier Type (0-V	rrier Height:	0.0 feet 0.0				leavy Tru						
• • • •	ist. to Barrier:	0.0 100.0 feet										
Centerline Dist.		110.0 feet		1	Voise So	urce Ele	vations (in	feet)				
Barrier Distance		10.0 feet				Autos:	0.000					
Observer Height		5.0 feet			Mediur	n Trucks:	2.297					
•	(Above Fau). ad Elevation:	0.0 feet			Heav	y Trucks:	8.006	Grade A	djustme	ent: 0.0		
_	ad Elevation: ad Elevation:	0.0 feet		-	ane For	ıivalent [Distance (i	n feet)				
	Road Grade:	0.0%				Autos:	109.950					
	Left View:	-90.0 degree	20		Mediur	n Trucks:	109.869					
	Right View:	90.0 degree				y Trucks:	109.877					
	,g	ou.o dogra	50			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
FHWA Noise Mod	el Calculations											
VehicleType		Traffic Flow	Dist	ance	Finite	Road	Fresnel	Barrier A	tten E	Berm Atten		
Autos:	71.78	1.72		-3.49)	0.00	-1.0	4 0	.000	0.000		
Medium Trucks:	82.40	-11.99		-3.49)	0.00	-1.1	5 0	.000	0.000		
Heavy Trucks:	86.40	-15.00		-3.49)	0.00	-1.4	3 0	.000	0.000		
Unmitigated Noise	e Levels (witho	ut Topo and	barrie	r atten	uation)							
VehicleType	Leq Peak Hour	Leq Day	,	Leq Ev	ening	Leq N	ight	Ldn		CNEL		
Autos:	70.0)	68.2	MATERIA AND AND AND ADDRESS OF THE PARTY OF	63.7		61.6	69	.6	69.9		
Medium Trucks:	66.9)	65.2		60.6		58.5	66	.5	66.8		
Heavy Trucks:	67.9)	66.1		61.6		59.5	67	.5	67.8		
Vehicle Noise:	73.2		71.5		66.9		64.8	72	.8	73.1		
Centerline Distand	ce to Noise Cor	ntour (in feet)									
		· •	i	70 d	BA	65 dE	3A	60 dBA	;	55 dBA		
		ı	Ldn:	21	0	664		2,101	i	6,645		
		CI	VEL:	22	5	711		2,248		7,108		

Scenario: Existing Conditions Road Name: Main St. (SR-67)

Road Segment: Montecito Rd. - Hunter St.

Project Name: Montecito Ranch

SITE SPECIFIC	INPUT DATA		NOISE MODEL INPUTS								
Highway Data		S	ite Conditions (F	Hard = 10, Sc	oft = 15)						
Average Daily Traffic (Adt Peak Hour Percentage		3	Medium Truc	Autos: cks (2 Axles):							
Peak Hour Volume	e: 2,730 vehicles	:	Heavy Truck	s (3+ Axles):	10						
Vehicle Speed	d: 55 mph	V	ehicle Mix								
Near/Far Lane Distance	e: 12 feet	-	VehicleType	Day	Evening	Night	Daily				
Site Data			Au	itos: 80.0%	7.0%	13.0%	94.00%				
Barrier Heigh	<i>t:</i> 0.0 feet		Medium Tru	cks: 80.0%	7.0%	13.0%	4.00%				
Barrier Type (0-Wall, 1-Berm			Heavy Tru	cks: 80.0%	7.0%	13.0%	2.00%				
Centerline Dist. to Barrie	r: 100.0 feet	A	loise Source Ele	vatione (in f	oot)						
Centerline Dist. to Observe	r: 110.0 feet		Autos:								
Barrier Distance to Observe	r: 10.0 feet		Medium Trucks:								
Observer Height (Above Pad). 5.0 feet		Heavy Trucks:		Grade Adju	stment:	: 0.0				
Pad Elevation											
Road Elevation	n: 0.0 feet	L	ane Equivalent L		feet)						
Road Grade	e: 0.0%		Autos:	109.950							
Left View	/: -90.0 degree	s	Medium Trucks:	109.869							
Right View	/: 90.0 degree	S	Heavy Trucks:	109.877							
FHWA Noise Model Calculate	ions										
VehicleType REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atter	n Ber	m Atten				
Autos: 71.	78 1.38	-3.49	0.00	-1.04	0.00	0	0.000				
Medium Trucks: 82.	40 -12.33	-3.49	0.00	-1.15	0.00	0	0.000				
Heavy Trucks: 86.	40 -15.34	-3.49	0.00	-1.43	0.00	0	0.000				

ricary ridene	. 00.10	10.04	0.40	0.00	7.40	0.000
Unmitigated Nois	se Levels (without	Topo and barri	er attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos	69.7	67.9	63.4	61.3	69.2	69.5
Medium Trucks	: 66.6	64.8	60.3	58.2	66.2	66.4
Heavy Trucks	67.6	65.8	61.3	59.2	67.1	67.4
Vehicle Noise	72.9	71.2	66.6	64.5	72.5	72.8

Centerline	Dictance	to No	ica C	ontour	(in foot)
L.enieriine	INSIANCE	(C) IV()	ISP L	corneoner .	iin leell

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	194	615	1,945	6,149
CNEL:	208	658	2,080	6,578

Scenario: Existing Conditions Road Name: Main St. (SR-67)

Road Segment: Hunter St.- Proposed SA-330

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS							
Highway Data				S	Site Con	ditions (H	ard = 10, Se	oft = 15)			
Average Daily	Traffic (Adt): 27,	,000 vehicles	;				Autos:	10			
Peak Hou	r Percentage:	10%			Me	dium Truck	s (2 Axles):	10			
Peak I	Hour Volume: 2,	,700 vehicles	;		He	avy Trucks	: (3+ Axles):	10			
Ve	ehicle Speed:	40 mph		L	/ehicle l	Miy					
Near/Far La	ane Distance:	12 feet				icleType	Day	Evening	Night	Daily	
Site Data						Aut			13.0%		
	arrier Height:	0.0 feet			Ме	edium Truc			13.0%	4.00%	
Barrier Type (0-V	•	0.0 leet 0.0			F	leavy Truc			13.0%	2.00%	
• • •		100.0 feet									
Centerline Dist.		110.0 feet		^	Noise Sc		ations (in f	eet)			
Barrier Distance		10.0 feet				Autos:	0.000				
Observer Height		5.0 feet				n Trucks:	2.297	0	•	0.0	
-	Pad Elevation:	0.0 feet			Heav	y Trucks:	8.006	Grade Ad	iustment.	0.0	
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalent D	istance (in	feet)			
	Road Grade:	0.0%				Autos:	109.950				
	Left View: -	-90.0 degree	s		Mediui	m Trucks:	109.869				
	Right View:	90.0 degree	s		Heav	y Trucks:	109.877				
FHWA Noise Mod	lel Calculations										
VehicleType	REMEL T	raffic Flow	Distai	nce	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten	
Autos:		2.72		-3.49		0.00	-1.04		000	0.000	
Medium Trucks:		-10.99		-3.49		0.00	-1.15		000	0.000	
Heavy Trucks:	82.99	-14.00		-3.49)	0.00	-1.43	0.0	000	0.000	
Unmitigated Nois	e Levels (without	t Topo and L	oarrier a	attenu	uation)						
VehicleType	Leq Peak Hour	Leq Day	L	eq Ev	rening	Leq Nig	ght	Ldn	CI	VEL	
Autos:	65.7	6	4.0		59.4		57.3	65.3	3	65.6	
Medium Trucks:	63.2	6	1.5		56.9		54.8	62.8	3	63.1	
Heavy Trucks:	65.5	6	3.7		59.2		57.1	65.1	<u> </u>	65.4	
Vehicle Noise:	69.7	6	8.0		63.4		61.3	69.3	3	69.6	
Centerline Distan	ce to Noise Cont	our (in feet)									
				70 d	BA	65 dB	A (60 dBA	55	dBA	

Ldn:

CNEL:

94

100

296

317

936

1,001

2,959

3,165

Scenario: Existing Conditions Road Name: Main St. (SR-67)

Road Segment: Proposed SA-330 - Highland Vall

Project Name: Montecito Ranch

SITE	SPECIFIC IN	IPUT DATA		NOISE MODEL INPUTS							
Highway Data				ite Conditions	(Hard = 1	0, Sc	oft = 15)				
Average Daily	Traffic (Adt):	27,000 vehicles	3		Α	utos:	10				
Peak Hou	r Percentage:	10%		Medium Trucks (2 Axles): 10							
Peak I	Hour Volume:	2,700 vehicles	3	Heavy Trucks (3+ Axles): 10							
Ve	ehicle Speed:	40 mph	1	Vehicle Mix							
Near/Far La	ane Distance:	12 feet		VehicleType) <i>[</i>	ay	Evening	Night	Daily		
Site Data				<u> </u>		0.0%		13.0%			
Ra	rrier Height:	0.0 feet		Medium T	rucks: 8	0.0%	7.0%	13.0%	4.00%		
Barrier Type (0-V	•	0.0		Heavy T	rucks: 8	0.0%	7.0%	13.0%	2.00%		
Centerline D	ist. to Barrier.	100.0 feet	^	loise Source E	evations	(in fe	eet)				
Centerline Dist.	to Observer:	110.0 feet		Auto		•					
Barrier Distance	to Observer:	10.0 feet		Medium Truck							
Observer Height	(Above Pad):	5.0 feet		Heavy Truck			Grade Ad	iustment	. 0 0		
P	ad Elevation:	0.0 feet		Troavy Track	· · · · · · · · · · · · · · · · · · ·						
Ro	ad Elevation:	0.0 feet	L	ane Equivalent	Distance	e (in	feet)				
	Road Grade:	0.0%		Autos: 109.950							
	Left View:	-90.0 degree	s	Medium Truck	s: 109.80	69					
	Right View:	90.0 degree	es	Heavy Truck	s: 109.8°	77					
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresne	1	Barrier Att	en Ber	m Atten		
Autos:	66.51	2.72	-3.49	0.00	-	1.04	0.0	000	0.000		
Medium Trucks:	77.72	-10.99	-3.49	0.00	-	1.15	0.0	000	0.000		
Heavy Trucks:	82.99	-14.00	-3.49	0.00	_	1.43	0.0	000	0.000		
Unmitigated Nois	e Levels (with	out Topo and I	barrier atteni	uation)					Total Control		
VehicleType	Leg Peak Hou	ır Leg Day	Leg Ev	ening Leg	Night		Ldn	Ci	NEL		

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.7	64.0	59.4	57.3	65.3	65.6
Medium Trucks:	63.2	61.5	56.9	54.8	62.8	63.1
Heavy Trucks:	65.5	63.7	59.2	57.1	65.1	65.4
Vehicle Noise:	69.7	68.0	63.4	61.3	69.3	69.6

Centerline Distance to Noise Contour (in feet)											
	70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:	94	296	936	2,959							
CNEL:	100	317	1,001	3,165							

Scenario: Existing Conditions Road Name: Main St. (SR-67)

Road Segment: Highland Valley Rd.- Archie Moor

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE		NOISE MODEL INPUTS										
Highway Data					Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt): 2	4,000 vehicle	s					Autos:	10			
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2	Axles):	10			
Peak H	lour Volume:	2,400 vehicle	s		He	avy Truc	ks (3+	Axles):	10			
Ve	hicle Speed:	40 mph		-	Vehicle I	Miv		-				
Near/Far La	ne Distance:	12 feet				icleType	Silva - 1 - 10	Day	Evening	Night	Daily	
Site Data							utos:	80.0%		13.0%		
	rrier Height:	0.0 feet			М	edium Tri		80.0%		13.0%		
Barrier Type (0-W		0.0 leet 0.0				leavy Tri		80.0%		13.0%		
Centerline Dis	•	100.0 feet										
Centerline Dist.		110.0 feet		/	Voise Sc	ource Ele			eet)			
Barrier Distance		10.0 feet				Autos		.000				
Observer Height (5.0 feet		!		m Trucks		.297				
• ,	ad Elevation:	0.0 feet			Heav	y Trucks	: 8	.006	Grade Ad	ljustment	<i>:</i> 0.0	
	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distaı	nce (in i	eet)			
	Road Grade:	0.0%				Autos	: 109	.950				
	Left View:	-90.0 degree	es	İ	Mediui	n Trucks	: 109	.869				
	Right View:	90.0 degree			Heav	y Trucks	: 109	.877				
FHWA Noise Mode	el Calculations											
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	ten Ber	m Atten	
Autos:	66.51	2.21		-3.49)	0.00		-1.04	0.0	000	0.000	
Medium Trucks:	77.72	-11.50		-3.49	•	0.00		-1.15	0.0	000	0.000	
Heavy Trucks:	82.99	-14.51		-3.49	9	0.00		-1.43	0.0	000	0.000	
Unmitigated Noise	e Levels (witho	ut Topo and	barri	er atten	uation)							
VehicleType	Leq Peak Hour	Leq Day	′	Leq Ev	ening	Leq N	Vight		Ldn	Ci	NEL	
Autos:	65.2		63.5		58.9		56	8	64.8	8	65.1	
Medium Trucks:	62.7	· (61.0		56.4		54.	3	62.	3	62.6	
Heavy Trucks:	65.0		63.2		58.7		56.	6	64.0	6	64.8	
Vehicle Noise:	69.2		67.5		62.9		60	8	68.	8	69.1	
Centerline Distanc	e to Noise Con	tour (in feet))									
		.	!	70 d	IBA	65 d	IBA	6	0 dBA	55	dBA	

Ldn:

CNEL:

83

89

263

281

832

890

2,630

2,813

Scenario: Existing Conditions Road Name: Main St. (SR-67)

Road Segment: Archie Moore Rd. - Poway Rd

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE	SPECIFIC IN	NPUT DATA		NOISE MODEL INPUTS								
Highway Data				Site Con	ditions (Ha	ard = 10, Sc	oft = 15)					
Average Daily	/ Traffic (Adt):	25,000 vehicles				Autos:	10					
Peak Hou	r Percentage:	10%		Me	dium Truck	s (2 Axles):	10					
Peak .	Hour Volume:	2,500 vehicles		Heavy Trucks (3+ Axles): 10								
V	ehicle Speed:	40 mph		Vehicle	Miv							
Near/Far L	ane Distance:	12 feet			icleType	Day	Evening	Night	Daily			
Site Data				V C//	Aut			13.0%				
		0.0.4		M	edium Truc			13.0%	4.00%			
Barrier Type (0-V	arrier Height: Nall, 1-Berm):	0.0 feet 0.0			Heavy Truc			13.0%	2.00%			
	ist. to Barrier.	100.0 feet		Noise Source Elevations (in feet)								
Centerline Dist	. to Observer.	110.0 feet	ļ		Autos:	0.000						
Barrier Distance	e to Observer:	10.0 feet		Mediu	m Trucks:	2.297						
Observer Height (Above Pad): 5.0 feet					vy Trucks:	8.006	Grade Ad	iustment	. 0 0			
F	Pad Elevation:	0.0 feet		ı icav	y Hucks.	0.000	arade riaj	asimoni	. 0.0			
Ro	oad Elevation:	0.0 feet		Lane Eq	uivalent Di	stance (in	feet)					
	Road Grade:	0.0%			Autos:	109.950						
	Left View:	-90.0 degrees	S	Mediu	m Trucks:	109.869						
	Right View:	90.0 degrees	s	Heav	y Trucks:	109.877						
FHWA Noise Mod	del Calculation	s										
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Ber	m Atten			
Autos	66.51	2.38	-3.4	.9	0.00	-1.04	0.0	000	0.000			
Medium Trucks	77.72	-11.33	-3.4	.9	0.00	-1.15	0.0	000	0.000			
Heavy Trucks.	82.99	-14.34	-3.4	.9	0.00	-1.43	0.0	000	0.000			
Unmitigated Nois			arrier atte	nuation)								
VehicleType	Leq Peak Hou	ır Leq Day	Leq E	vening	Leq Nig	ıht	Ldn		VEL			
Autos.	65	.4 6	3.6	59.1		57.0)	65.3			
Medium Trucks.	62	.9 6	1.1	56.6		54.5	62.5	5	62.8			
		_										

58.8

63.1

70 dBA

87

93

56.8

61.0

65 dBA

274

293

64.7

69.0

60 dBA

866

927

65.0

69.3

55 dBA

2,740

2,931

Thursday	May 21	2007

Heavy Trucks:

Vehicle Noise:

65.2

69.4

Centerline Distance to Noise Contour (in feet)

63.4

67.6

Ldn:

CNEL:

Scenario: Existing Conditions

Road Name: Proposed SA-330 (Montecito Way Road Segment: Montecito Rd. - Montecito Ranch

Project Name: Montecito Ranch

SITE	SPECIFIC INP	UT DATA			NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)							
Highway Data				S								
Average Daily	Traffic (Adt):	600 vehicle	S					Autos:	10			
	Percentage:	10%			Med	dium Truc	cks (2)	Axles):	10			
Peak H	Hour Volume:	60 vehicle	s		Hea	avy Truck	(s (3+)	Axles):	10			
Ve	ehicle Speed:	40 mph		1/	ehicle N	Aiv						
Near/Far La	ane Distance:	12 feet				cleType		Day	Evening	Night	Daily	
Site Data					VEITI		ıtos:	80.0%		13.0%		
					Me	ndium Tru		80.0%		13.0%		
	rrier Height:	0.0 feet				leavy Tru		80.0%		13.0%		
Barrier Type (0-W		0.0				cavy 11a		00.070			0 1.0070	
		100.0 feet		N	oise So	urce Ele	vation	s (in fe	et)			
Centerline Dist.		110.0 feet				Autos:	0.	000				
Barrier Distance		10.0 feet			Mediur	n Trucks:	2.	297				
Observer Height		5.0 feet			Heav	y Trucks:	8.	006	Grade Ad	justmer	nt: 0.0	
•	ad Elevation:	0.0 feet		-		-!I		/!	f4\			
	ad Elevation:	0.0 feet		Li	ane Equ	ivalent L			reet)			
	Road Grade:	0.0%				Autos:						
		-90.0 degree				n Trucks:						
	Right View:	90.0 degree	es		Heav _.	y Trucks:	109.	877				
FHWA Noise Mod	lel Calculations											
VehicleType	REMEL T	raffic Flow	Dista	ance	Finite	Road	Fresr	nel	Barrier Att	en Be	erm Atten	
Autos:	66.51	-13.77		-3.49		0.00		-1.04	0.0	000	0.000	
Medium Trucks:	77.72	-27.52		-3.49		0.00		-1.15	0.0	000	0.000	
Heavy Trucks:	82.99	-33.54		-3.49		0.00		-1.43	0.0	000	0.000	
Unmitigated Nois	e Levels (withou	t Topo and	barrie	r attenu	ation)							
VehicleType	Leq Peak Hour	Leq Day	·	Leq Eve	ening	Leq N	light		Ldn	(CNEL	
Autos:	49.3	•	47.5		42.9		40.9)	48.8	3	49.1	
Medium Trucks:	46.7	•	44.9		40.4		38.3	3	46.3	3	46.6	
Heavy Trucks:	46.0		44.2		39.6		37.6	3	45.5	5	45.8	
Vehicle Noise:	52.3		50.6		46.0		43.9)	51.9	9	52.2	
Centerline Distan	ce to Noise Cont	tour (in feet,)		1					1		
				70 dE	3 <i>A</i>	65 dl	BA	ϵ	60 dBA	5.	5 dBA	
			Ldn:	2		5			17		54	
		CN	VEL:	2		6			18		57	

Scenario: Existing Conditions

Road Name: Proposed SA-330 (Montecito Way Road Segment: Montecito Rd.- Main St. (SR-67)

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE S	SPECIFIC INP	UT DATA		NOISE MODEL INPUTS					
Highway Data				Site Cor	nditions (l	Hard = 10, S	oft = 15)		
Average Daily	Traffic (Adt):	0 vehicles	3			Autos	: 10		
Peak Hour I	Percentage:	10%		Me	edium True	cks (2 Axles)	: 10		
Peak Ho	our Volume:	0 vehicles	5	He	eavy Truck	ks (3+ Axles)	: 10		
Vel	nicle Speed:	40 mph		Vehicle	Miy				
Near/Far Lar	ne Distance:	12 feet	part of the state		nicleType	Day	Evening	Night	Daily
Site Data						utos: 80.0%			95.00%
	rior Hoight:	0.0 feet		N	ledium Tru			13.0%	4.00%
Barrier Type (0-Wa	rier Height: all 1-Berm)	0.0 leet 0.0			Heavy Tru			13.0%	1.00%
Centerline Dis	•	100.0 feet		Noise C	ourse Ele	wations (in	foot)		
Centerline Dist. t	to Observer:	110.0 feet		Noise 5		vations (in	eet)		
Barrier Distance t	o Observer:	10.0 feet			Autos:				
Observer Height (A	Above Pad):	5.0 feet			ım Trucks.		Cuada Ad		
• •	d Elevation:	0.0 feet		неа	vy Trucks.	8.006	Grade Ad	justinent	. 0.0
Roa	d Elevation:	0.0 feet		Lane Eq	uivalent l	Distance (in	feet)		
F	Road Grade:	0.0%	Ī		Autos:	109.950			
	Left View:	-90.0 degree	s	Mediu	ım Trucks.	109.869			į
	Right View:	90.0 degree	es	Hea	vy Trucks:	109.877			
FHWA Noise Mode	l Calculations								
VehicleType	REMEL T	raffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos:	66.51	-51.55	-3.4	19	0.00	-1.04	0.0	000	0.000
Medium Trucks:	77.72	-65.31	-3.4	19	0.00	-1.15	0.0	000	0.000
Heavy Trucks:	82.99	-71.33	-3.4	19	0.00	-1.43	0.0	000	0.000
Unmitigated Noise	Levels (withou	t Topo and I	barrier atte	nuation)			-		
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq N	light	Ldn	CI	VEL

Heavy Trucks:	8.2 6.4	1.9	-0.2	7.7	8.0
Vehicle Noise:	14.5 12.8	8.2	6.1	14.1	14.4
Centerline Distance to	Noise Contour (in feet)				
		70 dBA	65 dBA	60 dBA	55 dBA
	Ldn:	0	0	0	0

0

5.2

2.6

3.1

0.5

0

11.0

8.5

11.3

8.8

0

11.5

8.9

9.7

7.2

CNEL:

Medium Trucks:

Autos:

Scenario: Existing Conditions

Road Name: Proposed SA-330 (Montecito Ran Road Segment: Project West Access to Montecito

Project Name: Montecito Ranch

SITE	SPECIFIC INF	PUT DATA					NOISE	MODE	L INPUT	S	
Highway Data					Site Conditions (Hard = 10, Soft = 15)						
Average Daily	Traffic (Adt):	0 vehicle	S					Autos:	10		
Peak Hour	Percentage:	10%			Me	dium Ti	rucks (2	Axles):	10		
Peak F	lour Volume:	0 vehicle	s		He	avy Tru	cks (3+	Axles):	10		
Ve	ehicle Speed:	40 mph			Vehicle I	Miv					
Near/Far La	ne Distance:	12 feet		-		icleTyp	•	Day	Evening	Night	Daily
Site Data					VEII		Autos:	80.0%		13.0%	
A					1/1	edium 7		80.0%		13.0%	
	rrier Height:	0.0 feet				leavy 7		80.0%		13.0%	
Barrier Type (0-W	•	0.0			,	icavy i	rucks.	00.07	7.070	13.070	1.00 /0
Centerline Di		100.0 feet			Noise Sc	ource E	levatio	ns (in f	eet)		
Centerline Dist.		110.0 feet				Auto	os: 0	.000			
Barrier Distance		10.0 feet			Mediui	n Truck	<i>is:</i> 2	.297			
Observer Height	•	5.0 feet			Heav	y Truck	<i>s:</i> 8	.006	Grade Adj	justment	t: 0.0
	ad Elevation:	0.0 feet		-		-		,,			
	ad Elevation:	0.0 feet		-	Lane Eq			· · · · · · · · · · · · · · · · · · ·	reet)		
	Road Grade:	0.0%				Auto		.950			
	Left View:	-90.0 degree				n Truck		.869			
	Right View:	90.0 degree	es		Heav	y Truck	<i>s:</i> 109	.877			
FHWA Noise Mod	el Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Bei	rm Atten
Autos:	66.51	-51.55		-3.4	9	0.00		-1.04	0.0	000	0.000
Medium Trucks:	77.72	-65.31		-3.4	9	0.00		-1.15	0.0	000	0.000
Heavy Trucks:	82.99	-71.33		-3.4	9	0.00		-1.43	0.0	000	0.000
Unmitigated Noise	e Levels (withou	ıt Topo and	barri	er atter	nuation)						
VehicleType	Leq Peak Hour	Leq Day	,	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	11.5		9.7		5.2		3.	1	11.0)	11.3
Medium Trucks:	8.9		7.2		2.6		0.	5	8.5	5	8.8
Heavy Trucks:	8.2		6.4		1.9		-0.	2	7.7	7	8.0
Vehicle Noise:	14.5		12.8		8.2		6.	1	14.1		14.4
Centerline Distand	ce to Noise Con	tour (in feet)						· · · · · · · · · · · · · · · · · · ·		
				70	dBA	65	dBA	6	60 dBA	55	dBA
			Ldn:	(ם [']		0		0		0
		CI	VEL:	()		0		0		0

Scenario: Existing Conditions
Road Name: Proposed SA-330 (Montecito Ran Road Segment: Between Main Project Access Poi

Project Name: Montecito Ranch

SITE SPECIFIC II	NPUT DATA		NOISE MODEL INPUTS				
Highway Data		1	Site Conditions (Hard = 10,	Soft = 15)		
Average Daily Traffic (Adt):	0 vehicles	s		Auto	s: 10		
Peak Hour Percentage:	10%		Medium Tru	icks (2 Axle	<i>s):</i> 10		
Peak Hour Volume:	0 vehicles	s	Heavy Truc	ks (3+ Axle	s): 10		
Vehicle Speed:	40 mph		Vehicle Mix				
Near/Far Lane Distance:	12 feet	_	VehicleType	Day	Evening	Night	Daily
Site Data			A	utos: 80.0	7.0%	13.0%	95.00%
Barrier Height:	0.0 feet		Medium Tr	ucks: 80.0	7.0%	13.0%	4.00%
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Tr	ucks: 80.0	7.0%	13.0%	1.00%
Centerline Dist. to Barrier:	100.0 feet		Noise Source Ele	evations (ir	feet)		
Centerline Dist. to Observer:	110.0 feet	-	Autos				
Barrier Distance to Observer:	10.0 feet		Medium Trucks				
Observer Height (Above Pad):	5.0 feet		Heavy Trucks		Grade Ad	diustment	: 0.0
Pad Elevation:	0.0 feet	-	Trouty Trucke	. 0.000			
Road Elevation:	0.0 feet		Lane Equivalent	Distance (i	n feet)		
Road Grade:	0.0%	Maria Maria	Autos	: 109.950			
Left View:	-90.0 degree	es	Medium Trucks	: 109.869			
Right View:	90.0 degree	es	Heavy Trucks	: 109.877			
FHWA Noise Model Calculation	1S						
VehicleType REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier At	ten Ber	m Atten
Autos: 66.51	-51.55	-3.4	9 0.00	-1.C	0.	000	0.000
Medium Trucks: 77.72	-65.31	-3.4	9 0.00	-1.1	<i>5</i> 0.	000	0.000
Heavy Trucks: 82.99	-71.33	-3.4	9 0.00	-1.4	3 0.	000	0.000

Unmitigated Nois	Inmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos	11.5	9.7	5.2	3.1	11.0	11.3						
Medium Trucks	: 8.9	7.2	2.6	0.5	8.5	8.8						
Heavy Trucks	8.2	6.4	1.9	-0.2	7.7	8.0						
Vehicle Noise	: 14.5	12.8	8.2	6.1	14.1	14.4						

Centerline Distance to Noise Contour (in feet)	,			
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	0	0	0	0
CNEL:	0	0	0	0

Scenario: Existing Conditions

Road Name: Ash St.

Road Segment: East Project Access - Pine St. (S

Project Name: Montecito Ranch

SITE S	PECIFIC IN	PUT DATA		NC	DISE MODE	L INPUTS		
Highway Data			Si	ite Conditions (F	dard = 10, Se	oft = 15)		
Average Daily T	• •	500 vehicles	1		Autos:			
Peak Hour F	Percentage:	10%		Medium Truc	,	•		
Peak Ho	our Volume:	50 vehicles	,	Heavy Truck	s (3+ Axles):	10		
Veh	icle Speed:	40 mph	V	ehicle Mix				
Near/Far Lan	e Distance.	12 feet		VehicleType	Day	Evening	Night	Daily
Site Data				Aι	itos: 80.0%	7.0%	13.0%	95.00%
Barr	ier Height:	0.0 feet		Medium Tru	cks: 80.0%	7.0%	13.0%	4.00%
Barrier Type (0-Wa	_	0.0		Heavy Tru	cks: 80.0%	7.0%	13.0%	1.00%
Centerline Dist	t. to Barrier:	100.0 feet	N	oise Source Ele	vations (in f	eet)		
Centerline Dist. to Barrier Distance to Observer Height (A	Observer:	110.0 feet 10.0 feet 5.0 feet 0.0 feet		Autos: Medium Trucks: Heavy Trucks:	2.297	Grade Adju	stment	: 0.0
	d Elevation.	0.0 feet	La	ane Equivalent L	Distance (in	feet)		
R	oad Grade:	0.0%		Autos:	109.950			
	Left View:	-90.0 degree	s	Medium Trucks:	109.869			
	Right View:	90.0 degree	s	Heavy Trucks:	109.877			
FHWA Noise Model	Calculations	\$						
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	n Ber	m Atten
Autos:	66.51	-14.56	-3.49	0.00	-1.04	0.00	0	0.000
Medium Trucks:	77.72	-28.32	-3.49	0.00	-1.15	0.00	0	0.000
Heavy Trucks:	82.99	-34.34	-3.49	0.00	-1.43	0.00	0	0.000

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	48.5	46.7	42.1	40.1	48.0	48.3						
Medium Trucks:	45.9	44.2	39.6	37.5	45.5	45.8						
Heavy Trucks:	45.2	43.4	38.8	36.8	44.7	45.0						
Vehicle Noise:	51.5	49.8	45.2	43.1	51.1	51.4						

Centerline Distance to Noise Contour (in feet)											
	70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:	1	4	14	45							
CNEL:	2	5	15	48							

Scenario: Existing Conditions

Road Name: Ash St.

Road Segment: Pine St.(SR-78) - Elm St.

Project Name: Montecito Ranch

Job Number: 4568

Analyst: A. Stalker

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SITE	SPECIFIC IN	NPUT DATA			NOISE	MODE	L INPUT	S	
Highway Data			1	Site Conditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	/ Traffic (Adt):	500 vehicle	es			Autos:	10		
Peak Hou	r Percentage:	10%		Medium T	rucks (2	2 Axles):	10		
Peak i	Hour Volume:	50 vehicle	es	Heavy Tru	ıcks (3-	+ Axles):	10		
V	ehicle Speed:	40 mph		Vehicle Mix					
Near/Far La	ane Distance:	12 feet		VehicleTyp	e	Day	Evening	Night	Daily
Site Data					Autos:	80.0%		13.0%	
Bá	arrier Height:	0.0 feet		Medium [*]	Trucks:	80.0%	7.0%	13.0%	4.00%
Barrier Type (0-V	•	0.0		Heavy 1	Trucks:	80.0%	7.0%	13.0%	1.00%
	ist. to Barrier.	100.0 feet		Noise Source E	Elevatio	ons (in fe	eet)		
Centerline Dist		110.0 feet		Auto		0.000			
Barrier Distance		10.0 feet		Medium Truc	ks:	2.297			
Observer Height	•	5.0 feet		Heavy Truck		8.006	Grade Ad	justment	<i>:</i> 0.0
F	Pad Elevation:	0.0 feet							
Ro	oad Elevation:	0.0 feet	1	Lane Equivaler	nt Dista	nce (in i	feet)		
	Road Grade:	0.0%		Auto	os: 10	9.950			
	Left View:	-90.0 degre	es	Medium Truc	ks: 10	9.869			
	Right View:	90.0 degre	es	Heavy Truc	ks: 10	9.877			
FHWA Noise Mod	del Calculation	s							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fre	snel	Barrier Att	en Ber	rm Atten
Autos:	66.51	-14.56	-3.4	9 0.00		-1.04	0.0	000	0.000

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-14.56	-3.49	0.00	-1.04	0.000	0.000
Medium Trucks:	77.72	-28.32	-3.49	0.00	-1.15	0.000	0.000
Heavy Trucks:	82.99	-34.34	-3.49	0.00	-1.43	0.000	0.000
Unmitigated Noise	Levels (with	out Topo and I	barrier attenu	ation)			

Inmitigated Nois	e Levels (without	Topo and barri	er attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	48.5	46.7	42.1	40.1	48.0	48.3
Medium Trucks.	45.9	44.2	39.6	37.5	45.5	45.8
Heavy Trucks:	45.2	43.4	38.8	36.8	44.7	45.0
Vehicle Noise.	51.5	49.8	45.2	43.1	51.1	51.4

Centerline Distance to Noise Contour (in feet)	70 dBA 65 dBA 60 dBA 55 dBA Ldn: 1 4 14 45								
	70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:	1	4	14	45					
CNEL:	2	5	15	48					

Scenario: Existing Conditions Road Name: Montecito Rd.

Road Segment: Montecito Way - Davis St.

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE	SPECIFIC IN	PUT DATA			NOISE MODEL INPUTS							
Highway Data				9	Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt):	3,500 vehicle	S					Autos:	10			
Peak Hour	Percentage:	10%			Me	dium Tru	ucks (2	2 Axles):	10			
Peak H	lour Volume:	350 vehicle	s		Heavy Trucks (3+ Axles): 10							
Ve	hicle Speed:	40 mph		1	Vehicle Mix							
Near/Far La	ne Distance:	12 feet				cleType		Day	Evening	Night	Daily	
Site Data							Autos:	80.0%		13.0%		
	rrier Height:	0.0 feet								13.0%	4.00%	
Barrier Type (0-W	_	0.0 feet			F	leavy Ti	rucks:	80.0%		13.0%	1.00%	
Centerline Di	•	100.0 feet										
Centerline Dist.		110.0 feet		^	loise So			ns (in fe	eet)			
Barrier Distance		10.0 feet				Autos		0.000				
Observer Height (5.0 feet			Mediur	n Trucks	s: 2	2.297				
•	ad Elevation:	0.0 feet			Heav	y Trucks	s: 8	3.006	Grade Ad	iustment.	: 0.0	
Road Elevation: 0.0 feet				7	ane Fai	ıivalent	Dista	nce (in i	feet)			
	Road Grade:	0.0%			29	Autos		9.950				
'	Left View:	-90.0 degre	20		Mediur	n Trucks		9.869				
	Right View:	90.0 degree			Heavy Trucks: 109.877							
	riigine view.	Jo.o degree	-50			<i>,</i> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		0.011				
FHWA Noise Mode	el Calculations											
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atten	
Autos:	66.51	-6.11		-3.49)	0.00		-1.04	0.0	000	0.000	
Medium Trucks:	77.72	-19.86		-3.49)	0.00		-1.15	0.0	000	0.000	
Heavy Trucks:	82.99	-25.89		-3.49)	0.00		-1.43	0.0	000	0.000	
Unmitigated Noise	e Levels (witho	ut Topo and	barrie	r atten	uation)							
VehicleType	Leq Peak Hour	Leq Day	,	Leq Ev	rening	Leq	Night		Ldn	CI	VEL	
Autos:	56.9)	55.2		50.6		48	3.5	56.	5	56.8	
Medium Trucks:	54.4	1	52.6		48.0		46	6.0	53.9	9	54.2	
Heavy Trucks:	53.6	3	51.9		47.3	47.3 45.2		5.2	53.2		53.5	
Vehicle Noise:	60.0)	58.2		53.7		51	.6	59.	5	59.8	

70 dBA

10

11

Ldn:

CNEL:

65 dBA

31

33

60 dBA

99

106

55 dBA

313

335

Scenario: Existing Conditions Road Name: Montecito Rd.

Road Segment: Davis St. - Main St. (SR-67)

Project Name: Montecito Ranch

SITE S	PECIFIC IN	PUT DATA			NOISE MOD	EL INPUTS	<u> </u>		
Highway Data				Site Conditions	(Hard = 10, \$	Soft = 15)			
Average Daily T Peak Hour F Peak Ho		6,000 vehicles 10% 600 vehicles	!		Autos rucks (2 Axles ucks (3+ Axles	e): 10			
Veh Near/Far Lan	nicle Speed: ne Distance:	40 mph 12 feet		Vehicle Mix VehicleTyp	e Day	Evening	Night	Daily	
Site Data					Autos: 80.0		13.0%		
	rier Height: all, 1-Berm):	0.0 feet 0.0		Medium T Heavy T	<i>rucks:</i> 80.0	% 7.0%	13.0% 13.0%	4.00%	
Centerline Dist. to Barrier: Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Grade: Left View:		oserver: 110.0 feet oserver: 10.0 feet ve Pad): 5.0 feet evation: 0.0 feet evation: 0.0 feet orange: 0.0%		Noise Source Elevations (in feet) Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0 Lane Equivalent Distance (in feet) Autos: 109.950 Medium Trucks: 109.869					
	Right View:	90.0 degree	s	Heavy Truck	<i>(s:</i> 109.877				
FHWA Noise Mode	l Calculations	S							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	en Ber	m Atten	
Autos:	66.51	-3.77	-3.4	9 0.00	-1.04	4 0.0	00	0.000	
Medium Trucks:	77.72	-17.52	-3.49	9 0.00	-1.15	5 0.0	00	0.000	
Heavy Trucks:	82.99	-23.54	-3.49	9 0.00	-1.43	3 0.0	00	0.000	

Inmitigated Nois	nmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos.	59.3	57.5	52.9	50.9	58.8	59.1						
Medium Trucks.	56.7	54.9	50.4	48.3	56.3	56.6						
Heavy Trucks.	56.0	54.2	49.6	47.6	55.5	55.8						
Vehicle Noise.	62.3	60.6	56.0	53.9	61.9	62.2						

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	17	54	170	536
CNEL:	18	57	181	574

Scenario: Existing + Project

Road Name: SR-78

Road Segment: Ash St. - Haverford Rd.

Leq Peak Hour

61.4

58.9

61.2

Leq Day

59.7

57.2

59.4

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE SPECIFIC I	NPUT DATA		NOISE MODEL INPUTS								
Highway Data		5	Site Conditions	(Hard = 10, Se	oft = 15)						
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	9,994 vehicles 10% 999 vehicles			Autos: ucks (2 Axles). cks (3+ Axles).	: 10						
Vehicle Speed:	40 mph	V	ehicle Mix								
Near/Far Lane Distance:	12 feet		VehicleType Day Evening N								
Site Data			,	Autos: 80.0%	6 7.0%	13.0%	94.00%				
Barrier Height:	0.0 feet		Medium T	rucks: 80.0%	6 7.0%	13.0%	4.00%				
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy T	rucks: 80.0%	6 7.0%	13.0%	2.00%				
Centerline Dist. to Barrier:					Noise Source Elevations (in feet)						
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	110.0 feet 10.0 feet 5.0 feet 0.0 feet		Auto Medium Truck Heavy Truck	s: 2.297	Grade Adji	ustment	<i>:</i> 0.0				
Road Elevation:	0.0 feet	L	Lane Equivalent Distance (in feet)								
Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree		Autos: 109.950 Medium Trucks: 109.869 Heavy Trucks: 109.877								
FHWA Noise Model Calculation	าร										
VehicleType REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	en Ber	m Atten				
Autos: 66.51	-1.60	-3.49	0.00	-1.04	0.0	00	0.000				
Medium Trucks: 77.72	-15.31	-3.49	0.00	-1.15	0.0	00	0.000				
Heavy Trucks: 82.99	-18.32	-3.49	0.00	-1.43	0.0	00	0.000				
Unmitigated Noise Levels (with	out Topo and	barrier attenu	uation)								

Vehicle Noise:	65.4 63.7	59.	1 57.0	65.0	65.3
Centerline Distance to	Noise Contour (in feet)				
		70 dBA	65 dBA	60 dBA	55 dBA
	Ldn.	35	110	346	1,095
	CNEL.	37	117	370	1,172

Leq Evening

55.1

52.6

54.9

Leq Night

53.0

50.5

52.8

Ldn

61.0

58.5

60.8

CNEL

61.3

58.8

61.0

VehicleType

Medium Trucks:

Heavy Trucks:

Autos:

Scenario: Existing + Project

Road Name: SR-78

Road Segment: Ash St. - Olive St.

Project Name: Montecito Ranch

SITE SPE	CIFIC II	NPUT DATA		NOISE MODEL INPUTS							
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traft	fic (Adt):	12,024 vehicles				Autos:	10				
Peak Hour Perd	centage:	10%		Medium T	rucks (.	2 Axles):	10				
Peak Hour	_	1,202 vehicles		Heavy Tru	ıcks (3	+ Axles):	10				
Vehicle	Speed:	40 mph		Mahiala Miss							
Near/Far Lane D	•	12 feet		Vehicle Mix							
ream ar Earle B		12 1000		VehicleTyp	e	Day	Evening	Night	Daily		
Site Data					Autos:	80.0%	7.0%	13.0%	94.00%		
Rarrier	Height:	0.0 feet		Medium 1	Trucks:	80.0%	7.0%	13.0%	4.00%		
Barrier Type (0-Wall, 1	_	0.0		Heavy 7	Trucks:	80.0%	7.0%	13.0%	2.00%		
Centerline Dist. to	Barrier.	100.0 feet		Noise Source E	levatio	ons (in fe	eet)				
Centerline Dist. to O	bserver:	110.0 feet		Auto		0.000					
Barrier Distance to O	bserver:	10.0 feet		Medium Truci		2.297					
Observer Height (Abov	ve Pad):	5.0 feet					Grade Ad	iuctmont	. 0 0		
=	levation:	0.0 feet		Heavy Truci	KS:	8.006	Grade Au	jusimeni.	0.0		
Road El	levation:	0.0 feet		Lane Equivaler	nt Dista	nce (in t	feet)				
Road	d Grade:	0.0%		Auto	os: 10	9.950					
Le	eft View:	-90.0 degree	s	Medium Truci	ks: 10	9.869					
Rig	ht View:	90.0 degree	s	Heavy Truci	ks: 10	9.877					
FHWA Noise Model Ca	alculation	ıs									
VehicleType R	EMEL	Traffic Flow	Distance	Finite Road	Fre	snel	Barrier Att	en Ber	m Atten		

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-0.79	-3.49	0.00	-1.04	0.000	0.000
Medium Trucks:	77.72	-14.50	-3.49	0.00	-1.15	0.000	0.000
Heavy Trucks:	82.99	-17.52	-3.49	0.00	-1.43	0.000	0.000

nmitigated Nois	e Levels (without	Topo and barri	er attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.2	60.5	55.9	53.8	61.8	62.1
Medium Trucks:	59.7	58.0	53.4	51.3	59.3	59.6
Heavy Trucks:	62.0	60.2	55.7	53.6	61.6	61.8
Vehicle Noise:	66.2	64.5	59.9	57.8	65.8	66.1

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	42	132	417	1,318						
CNEL:	45	141	446	1,409						

Scenario: Existing + Project

Road Name: SR-78

Road Segment: Olive St. - Main St. (SR-67)

Project Name: Montecito Ranch

Job Number: 4568
Analyst: A. Stalker

SITE	SPECIFIC IN	PUT DATA		NOISE MODEL INPUTS						
Highway Data				Site Con	ditions (H	ard = 10, Sc	oft = 15)			
Average Daily Peak Hou Peak I Ve Near/Far La	Traffic (Adt): 12,054 vehicles Percentage: 10% our Volume: 1,205 vehicles hicle Speed: 40 mph ne Distance: 12 feet rier Height: 0.0 feet			Me He Vehicle I Veh	dium Trucks Avy Trucks Mix icleType Aut edium Truck	Autos: (S (2 Axles): (3+ Axles): Day (0s: 80.0%) (bks: 80.0%)	10 10 10 10 Evening 5 7.0%	<i>Night</i> 13.0% 13.0%	Daily 94.00% 4.00%	
Centerline Dist. Barrier Distance Observer Height P Ro	ist. to Barrier: to Observer: to Observer: (Above Pad): Pad Elevation: had Elevation: Road Grade: Left View: Right View:	0.0 100.0 feet 110.0 feet 10.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree		Mediun Heav Lane Equ	Autos: m Trucks: ry Trucks:	ations (in for 0.000 2.297 8.006 istance (in 109.950 109.877	eet) Grade Adju	13.0%	0.0	
FHWA Noise Mod			Diotopoo	Einito	Pood	Franci	Parriar Atta	n Por	m Atton	
VehicleType Autos:	66.51	Traffic Flow -0.78	Distance -3.4		0.00	-1.04	Barrier Atte 0.00	00	<i>n Atten</i> 0.000	
Medium Trucks: Heavy Trucks:		-14.49 -17.50	-3.4 -3.4		0.00 0.00	-1.15 -1.43	0.00 0.00		0.000	
Unmitigated Nois	e Levels (witho	ut Topo and	barrier atte	nuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq Nig	ght	Ldn	CI	<i>IEL</i>	
Autos:	62.2	2 (30.5	55.9		53.8	61.8		62.1	

53.4

55.7

59.9

70 dBA

42

45

51.3

53.6

57.8

65 dBA

132

141

59.3

61.6

65.8

60 dBA

418

447

59.6

61.9

66.1

55 dBA

1,321

1,413

Medium Trucks:

Heavy Trucks:

Vehicle Noise:

59.7

62.0

66.2

Centerline Distance to Noise Contour (in feet)

58.0

60.2

64.5

Ldn:

CNEL:

Scenario: Existing + Project

Road Name: 10th St.

Road Segment: Main St. (SR-67) - H St.

Project Name: Montecito Ranch

Job Number: 4568

Analyst: A. Stalker

SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Sit	e Conditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	7,479 vehicle	S				Autos:	10		
Peak Hour	Percentage:	10%			Medium Tru	icks (2	2 Axles):	10		
Peak H	lour Volume:	748 vehicle	s		Heavy Truc	ks (3+	- Axles):	10		
Ve	Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet			Ve	hicle Mix					
Near/Far La			-	VehicleType		Day	Evening	Night	Daily	
Site Data				~~~	7	utos:	80.0%	7.0%	13.0%	95.00%
Bai	rrier Height:	0.0 feet			Medium Tr	ucks:	80.0%	7.0%	13.0%	4.00%
Barrier Type (0-W	•	0.0		Heavy Trucks: 80.0% 7.0% 13.0%				1.00%		
Centerline Di	st. to Barrier.	100.0 feet		No	ise Source El	evatio	ns (in fe	eet)		
Centerline Dist. to Observer: 110.0 feet					Autos		0.000			
Barrier Distance to Observer: 10.0 feet				Medium Trucks		2.297				
Observer Height ((Above Pad):	5.0 feet		,	Heavy Trucks		3.006	Grade Ad	iuetmant	
Pá	ad Elevation:	0.0 feet	a) .		Heavy Hucks	·. (5.000	Grade Au	justinent	. 0.0
Roa	ad Elevation:	0.0 feet		Lane Equivalent Distance (in feet)						
ı	Road Grade:	0.0%		Autos: 109.950						
	Left View:	-90.0 degree	es	Medium Trucks: 109.869						
	Right View:	90.0 degree	es	Heavy Trucks: 109.877						
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance		Finite Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos:	66.51	-2.81	-3.4	19	0.00		-1.04	0.0	000	0.000
Medium Trucks:	77.72	-16.57	-3.4	19	0.00		-1.15	0.0	000	0.000
Heavy Trucks:	82.99	-22.59	-3.4	19	0.00		-1.43	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier atter	nua	ition)					

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.2	58.4	53.9	51.8	59.8	60.1
Medium Trucks:	57.7	55.9	51.3	49.3	57.2	57.5
Heavy Trucks:	56.9	55.2	50.6	48.5	56.5	56.8
Vehicle Noise:	63.3	61.5	57.0	54.9	62.8	63.1

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	67	211	668
CNEL:	23	71	226	715

Scenario: Existing + Project Road Name: Main St. (SR-78) Road Segment: 7th St. - 3rd St.

Project Name: Montecito Ranch

SITE	SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS					
Highway Data				Site Con	ditions (Hard	d = 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	3,594 vehicles				Autos:	10		
Peak Hour	Percentage:	10%		Medium Trucks (2 Axles): 10					
Peak H	Hour Volume:	2,359 vehicles		He	avy Trucks (3	+ Axles):	10		
Ve	ehicle Speed:	55 mph		Vehicle I	Miv				
Near/Far La	ane Distance:	12 feet			cleType	Day	Evening	Night	Daily
Site Data				Veri	Autos			13.0%	
	wise Usiabt	0.0 foot		Me	edium Trucks			13.0%	4.00%
	rrier Height:	0.0 feet 0.0			leavy Trucks			13.0%	2.00%
Barrier Type (0-V	ist. to Barrier:	100.0 feet							
Centerline Dist.		110.0 feet		Noise So	urce Elevati	ons (in fe	eet)		
Barrier Distance		10.0 feet			Autos:	0.000			
Observer Height		5.0 feet		Mediur	n Trucks:	2.297			
•	ad Elevation:	0.0 feet		Heav	y Trucks:	8.006	Grade Adj	ustment	: 0.0
	ad Elevation:	0.0 feet		Lane Equ	uivalent Dist	ance (in i	feet)		
Road Grade: 0.0%					09.950				
Left View: -90.0 degrees			Mediur		09.869				
	Right View:	90.0 degrees				09.877			
FHWA Noise Mod									
VehicleType		Traffic Flow	Distance		Road Fre		Barrier Atte	en Ber	m Atten
Autos:	71.78	0.75	-3	.49	0.00	-1.04	0.0	00	0.000
Medium Trucks:	82.40	-12.96		.49	0.00	-1.15	0.0		0.000
Heavy Trucks:	86.40	-15.97	-3	.49	0.00	-1.43	0.0	00	0.000
Unmitigated Noise	e Levels (witho	ut Topo and b	arrier atte	enuation)					
VehicleType	Leq Peak Hour	Leq Day	Leq	Evening	Leq Night		Ldn	CI	NEL
Autos:	69.0	67	7.3	62.7	6	0.6	68.6		68.9
Medium Trucks:	66.0) 64	4.2	59.6	5	7.6	65.5	,	65.8
Heavy Trucks:	66.9	65	5.2	60.6	5	8.5	66.5		66.8
Vehicle Noise:	72.3	3 70	0.5	66.0	6	3.9	71.8		72.1
Centerline Distan	ce to Noise Cor	ntour (in feet)							
		ŕ	70	0 dBA	65 dBA	6	60 dBA	55	dBA
		Lo	dn:	168	531		1,681	5,	315
		CNE	=1 ·	180	569		1,798	5	685

Scenario: Existing + Project
Road Name: Main St. (SR-67)
Road Segment: 10th St. - Montecito Rd.

Job Number: 4568 Analyst: A. Stalker

Project Name: Montecito Ranch

SITE SPECIFIC INPUT DATA	NOISE MODEL INPUTS
Highway Data	Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 30,206 vehicles	Autos: 10

Peak Hour Percentage: 10%
Peak Hour Volume: 3,021 vehicles

Medium Trucks (2 Axles): 10 Heavy Trucks (3+ Axles): 10

Vehicle Speed: 55 mph
Near/Far Lane Distance: 12 feet

Vehicle Mix VehicleType Day Evening Night Daily 80.0% 7.0% 13.0% 94.00% Autos: Medium Trucks: 80.0% 7.0% 13.0% 4.00%

80.0%

7.0%

13.0%

2.00%

Barrier Height: 0.0 feet
Barrier Type (0-Wall, 1-Berm): 0.0
Centerline Dist. to Barrier: 100.0 feet
Centerline Dist. to Observer: 110.0 feet

Noise Source Elevations (in feet)

Autos: 0.000

Medium Trucks: 2.297

Heavy Trucks:

Barrier Distance to Observer: 10.0 feet
Observer Height (Above Pad): 5.0 feet
Pad Elevation: 0.0 feet

Right View:

Heavy Trucks: 8.006 Grade Adjustment: 0.0

Road Elevation: 0.0 feet

Road Grade: 0.0%

Left View: -90.0 degrees

90.0 degrees

Autos: 109.950
Medium Trucks: 109.869
Heavy Trucks: 109.877

Lane Equivalent Distance (in feet)

FHWA Noise Model Calculations

Site Data

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.82	-3.49	0.00	-1.04	0.000	0.000
Medium Trucks:	82.40	-11.89	-3.49	0.00	-1.15	0.000	0.000
Heavy Trucks:	86.40	-14.90	-3.49	0.00	-1.43	0.000	0.000

Inmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	70.1	68.4	63.8	61.7	69.7	70.0				
Medium Trucks:	67.0	65.3	60.7	58.6	66.6	66.9				
Heavy Trucks:	68.0	66.2	61.7	59.6	67.6	67.9				
Vehicle Noise:	73.4	71.6	67.0	64.9	72.9	73.2				

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA

 Ldn:
 215
 680
 2,152
 6,804

 CNEL:
 230
 728
 2,302
 7,279

Scenario: Existing + Project
Road Name: Main St. (SR-67)

Road Segment: Montecito Rd. - Hunter St.

Project Name: Montecito Ranch

69.3

66.3

67.2

72.6

61.4

58.3

59.3

64.6

69.6

66.5

67.5

72.9

Job Number: 4568 Analyst: A. Stalker

SITE	SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS					
Highway Data				Site Cor	nditions (Hard = 10, \$	Soft = 15)		
Average Daily	/ Traffic (Adt): 2	27,947 vehicles	3			Autos	s: 10		
Peak Hou	r Percentage:	10%		Medium Trucks (2 Axles): 10					
Peak l	Hour Volume:	2,795 vehicles	3	He	eavy Truc	ks (3+ Axles): 10		
V	Vehicle Speed: 55 mph			Vehicle	Miv				
Near/Far La	ane Distance:	12 feet	1		iviix nicleType	Day	Evening	Night	Daily
Site Data				V 011		utos: 80.0		13.0%	
		004		M	edium Tr			13.0%	4.00%
	arrier Height:	0.0 feet						13.0%	2.00%
Barrier Type (0-V	•	0.0		Heavy Trucks: 80.0% 7.0% 13.0% 2.00%					
	ist. to Barrier:	100.0 feet		Noise S	ource Ele	evations (in	feet)		
Centerline Dist. to Observer: 110.0 feet					Autos	: 0.000			
Barrier Distance to Observer: 10.0 feet				Mediu	m Trucks	: 2.297			
Observer Height	•	5.0 feet			vy Trucks		Grade Ad	liustment	: 0.0
F	Pad Elevation:	0.0 feet							
Ro	oad Elevation:	0.0 feet	1	Lane Equivalent Distance (in feet)					
	Road Grade:	0.0%		Autos: 109.950					
	Left View:	-90.0 degree	s	Medium Trucks: 109.869					
	Right View:	90.0 degree	s	Heavy Trucks: 109.877					
FHWA Noise Mod	del Calculations	3							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	ten Ber	m Atten
Autos:	71.78	1.49	-3.49	9	0.00	-1.04	0.0	000	0.000
Medium Trucks:	82.40	-12.23	-3.49	9	0.00	-1.15	5 0.0	000	0.000
Heavy Trucks:	86.40	-15.24	-3.49	9	0.00	-1.43	3 0.0	000	0.000
Unmitigated Nois	e Levels (witho	out Topo and I	barrier atten	uation)					
VehicleType	Leq Peak Hou	r Leq Day	Leq E	vening	Leq N	light	Ldn	CI	VEL

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	199	630	1,991	6,295						
CNEL:	213	673	2,130	6,734						

63.5

60.4

61.4

66.7

68.0

64.9

65.9

71.3

Autos:

Medium Trucks:

Heavy Trucks:

Vehicle Noise:

69.8

66.7

67.7

73.0

Scenario: Existing + Project Road Name: Main St. (SR-67)

Road Segment: Hunter St.- Proposed SA-330

Project Name: Montecito Ranch

SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS									
Highway Data			s	ite Conditions (Hard = 10, Sc	oft = 15)			
Average Daily	Traffic (Adt):	27,647 vehicles	5		Autos:	10			
Peak Hour	Percentage:	10%		Medium Tru	cks (2 Axles):	10			
Peak H	Peak Hour Volume: 2,765 vehicles			Heavy Truck	ks (3+ Axles):	10			
Ve	hicle Speed:	40 mph	V	ehicle Mix					
Near/Far La	ne Distance:	12 feet	•	VehicleType	Day	Evening	Night	Daily	
Site Data					utos: 80.0%	7.0%	13.0%	94.00%	
Bai	rrier Height:	0.0 feet		Medium Tru	<i>icks:</i> 80.0%	7.0%	13.0%	4.00%	
Barrier Type (0-W	_	0.0		Heavy Tru	<i>icks:</i> 80.0%	7.0%	13.0%	2.00%	
Centerline Di	st. to Barrier.	100.0 feet	N	oise Source Ele	vations (in f	eet)			
Centerline Dist. to Observer: 110.0 feet				Autos					
Barrier Distance	Barrier Distance to Observer: 10.0 feet			Medium Trucks					
Observer Height ((Above Pad):	5.0 feet				Grade Adj	uctmont	. 0 0	
Pá	ad Elevation:	0.0 feet		Heavy Trucks	8.006	Grade Auj	изинени	, 0.0	
Ros	ad Elevation:	0.0 feet	L	Lane Equivalent Distance (in feet)					
1	Road Grade:	0.0%		Autos	109.950				
	Left View:	-90.0 degree	es	Medium Trucks	109.869				
	Right View:	90.0 degree		Heavy Trucks	109.877				
FHWA Noise Mode	el Calculation	s						11 - 370	
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	en Ber	m Atten	
Autos:	66.51	2.82	-3.49	0.00	-1.04	0.0	00	0.000	
Medium Trucks:	77.72	-10.89	-3.49	0.00	-1.15	0.0	00	0.000	
Heavy Trucks:	82.99	-13.90	-3.49	0.00	-1.43	0.0	00	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.8	64.1	59.5	57.4	65.4	65.7			
Medium Trucks:	63.3	61.6	57.0	54.9	62.9	63.2			
Heavy Trucks:	65.6	63.8	59.3	57.2	65.2	65.5			
Vehicle Noise:	69.8	68.1	63.5	61.4	69.4	69.7			

Centerline Distance to Noise Contour (in feet)											
	70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:	96	303	958	3,030							
CNEL:	102	324	1,025	3,241							

Scenario: Existing + Project Road Name: Main St. (SR-67)

Road Segment: Proposed SA-330 - Highland Vall

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE	SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS							
Highway Data				Site Con	ditions (H	ard = 10, Sc	oft = 15)						
Average Daily	Traffic (Adt): 2	8,471 vehicle	s			Autos:	10						
Peak Hou	r Percentage.	10%		Me	dium Truck	ks (2 Axles):	10						
Peak I	Hour Volume:	2,847 vehicle	s	He	avy Trucks	: (3+ Axles):	10						
Ve	ehicle Speed:	40 mph		Vehicle Mix									
Near/Far La	ane Distance:	12 feet		VehicleType Day Evening Night									
Site Data					Aut			13.0%	<i>Daily</i> 94.00%				
Ra	rrier Height:	0.0 feet		Me	edium Truc			13.0%	4.00%				
Barrier Type (0-V	_	0.0		μ	Heavy Truc			13.0%	2.00%				
'	ist. to Barrier:	100.0 feet						mar and analysis					
Centerline Dist.		110.0 feet		Noise Sc		ations (in fe	eet)						
Barrier Distance		10.0 feet			Autos:	0.000							
Observer Height		5.0 feet		Mediui	m Trucks:	2.297							
•	ad Elevation:	0.0 feet		Heav	y Trucks:	8.006	Grade Ad	iustment.	0.0				
	ad Elevation: ad Elevation:	0.0 feet		Lane Equ	uivalent D	istance (in i	feet)						
	Road Grade:	0.0%			Autos:	109.950	,						
	Left View:	-90.0 degree	ae	Mediu	m Trucks:	109.869							
	Right View:	90.0 degree			y Trucks:	109.877							
FHWA Noise Mod	lel Calculations												
VehicleType		Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier Att	en Ber	m Atten				
Autos:	66.51	2.95		.49	0.00	-1.04	0.0		0.00				
Medium Trucks:	77.72	-10.76	-3	.49	0.00	-1.15	0.0		0.000				
Heavy Trucks:	82.99	-13.77	-3	.49	0.00	-1.43	0.0		0.000				
Unmitigated Nois	e Levels (withou	ut Topo and	barrier att	enuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq	Evening	Leq Nig	ght	Ldn	CI	VEL				
Autos:	66.0)	64.2	59.6		57.6	65.5)	65.8				
Medium Trucks:	63.5	;	61.7	57.1		55.1	63.0)	63.				
Heavy Trucks:	65.7		64.0	59.4 57.3 65.3				3	65.0				
Vehicle Noise:	70.0		68.2	63.6		61.6	69.5)	69.				

70 dBA

99

106

Ldn:

CNEL:

65 dBA

312

334

60 dBA

987

1,055

55 dBA

3,120

3,337

Scenario: Existing + Project
Road Name: Main St. (SR-67)
Road Segment: Highland Valley Rd.- Archie Moor

Project Name: Montecito Ranch

SITE	SPECIFIC IN	IPUT DATA		NOISE MODEL INPUTS						
Highway Data				Site Conditions	(Hard	= 10, Sc	oft = 15)			
Average Daily	Traffic (Adt):	25,059 vehicles				Autos:	10			
Peak Hour	Percentage:	10%		Medium Tru	ıcks (2	? Axles):	10			
Peak H	lour Volume:	2,506 vehicles		Heavy Truc	cks (3+	Axles):	10			
Ve	ehicle Speed:	40 mph	entroda.	Vehicle Mix						
Near/Far La	ne Distance:	12 feet		VehicleType		Day	Evening	Night	Daily	
Site Data					lutos:	80.0%		13.0%	94.00%	
Ba	rrier Height:	0.0 feet		Medium Ti	rucks:	80.0%	7.0%	13.0%	4.00%	
Barrier Type (0-W	•	0.0		Heavy Ti	rucks:	80.0%	7.0%	13.0%	2.00%	
Centerline Di	ist. to Barrier.	100.0 feet	-	Noise Source El	evatio	ns (in f	eet)			
Centerline Dist.	to Observer:	110.0 feet '		Autos		0.000				
Barrier Distance	to Observer:	10.0 feet		Medium Trucks		2.297				
Observer Height	(Above Pad):	5.0 feet				3.006	Grade Ad	iustmant	. 0 0	
P	ad Elevation:	0.0 feet		Heavy Trucks	· (5.000	Grade Au	iustrierit	. 0.0	
Ro	ad Elevation:	0.0 feet		Lane Equivalent	Dista	nce (in	feet)			
	Road Grade:	0.0%		Autos	s: 109	9.950				
	Left View:	-90.0 degree	s	Medium Trucks	s: 109	9.869				
	Right View:	90.0 degree		Heavy Trucks	s: 109	9.877				
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fres	snel	Barrier Att	en Bei	m Atten	
Autos:	66.51	2.39	-3.4	9 0.00		-1.04	0.0	000	0.000	
Medium Trucks:	77.72	-11.32	-3.4	9 0.00		-1.15	0.0	000	0.000	
	00.00	4400				4 40			0 000	

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.39	-3.49	0.00	-1.04	0.000	0.000
Medium Trucks:	77.72	-11.32	-3.49	0.00	-1.15	0.000	0.000
Heavy Trucks:	82.99	-14.33	-3.49	0.00	-1.43	0.000	0.000

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.4	63.7	59.1	57.0	65.0	65.3
Medium Trucks:	62.9	61.2	56.6	54.5	62.5	62.8
Heavy Trucks:	65.2	63.4	58.9	56.8	64.7	65.0
Vehicle Noise:	69.4	67.6	63.1	61.0	69.0	69.3

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	87	275	868	2,746
CNEL:	93	294	929	2,938

Scenario: Existing + Project Road Name: Main St. (SR-67)

Road Segment: Archie Moore Rd. - Poway Rd

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE	SPECIFIC INP	UT DATA		NOISE MODEL INPUTS								
Highway Data				Site Conditions (Hard = 10, Soft = 15)								
Average Daily	Traffic (Adt): 25	,883 vehicles	3				Autos:	10				
	r Percentage:	10%		Me	edium Tr	ucks (2	Axles):	10				
Peak I	Hour Volume: 2	,588 vehicles	3	He	eavy Truc	cks (3+	Axles):	10				
Ve	ehicle Speed:	40 mph		Vehicle	Miv							
Near/Far La	ane Distance:	12 feet			nicleType	,	Day	Evening	Night	Daily		
Site Data						Autos:	80.0%		13.0%			
	uuiau Haimht.	0.0 feet		N	Iedium Ti		80.0%		13.0%			
Barrier Type (0-V	arrier Height:	0.0 feet 0.0			Heavy T		80.0%		13.0%			
• • •	•	0.0 100.0 feet										
Centerline Dist.		110.0 feet		Noise S				eet)				
Barrier Distance		10.0 feet			Auto		0.000					
Observer Height		5.0 feet			ım Truck		2.297					
_	Pad Elevation:	0.0 feet		Hea	vy Truck	s: 8	3.006	Grade Ad	ljustment	: 0.0		
	ad Elevation:	0.0 feet		Lane Eq	uivalent	t Dista	nce (in i	feet)				
	Road Grade:	0.0%			Auto		9.950					
		-90.0 degree	ıs.	Mediu	ım Truck		9.869					
	Right View:	90.0 degree		Hea	vy Truck	s: 109	9.877					
FHWA Noise Mod	lel Calculations	1 - 17 - 2 - 10 - 10 - 10 - 10 - 10 - 10 - 10					· · · · · · · · · · · · · · · · · · ·			W. C. 1800 (1994)		
VehicleType		raffic Flow	Distanc	e Finite	Road	Fres	snel	Barrier Att	en Bei	rm Atten		
Autos:		2.54		3.49	0.00		-1.04		000	0.000		
Medium Trucks:		-11.18		3.49	0.00		-1.15		000	0.000		
Heavy Trucks:	82.99	-14.19	-3	3.49	0.00		-1.43	0.0	000	0.000		
Unmitigated Nois	e Levels (withou	t Topo and I	barrier at	enuation)						11 10 10 10 10 10 10 10 10 10 10 10 10 1		
VehicleType	Leq Peak Hour	Leq Day	Lea	Evening	Leq	Night		Ldn	C	NEL		
Autos:	65.6	6	33.8	59.2		57	.2	65.	1	65.4		
Medium Trucks:	63.1	6	31.3	56.7	•	54	.6	62.6	6	62.9		
Heavy Trucks:	65.3	6	3.6	59.0)	56	.9	64.9	9	65.2		
Vehicle Noise:	69.6	6	87.8	63.2		61	.1	69.	1	69.4		
Centerline Distan	ce to Noise Cont	tour (in feet)										
			1	0 dBA	65	dBA	ϵ	60 dBA	55	dBA		

Ldn:

CNEL:

90

96

284

303

897

959

2,836 3,034

Scenario: Existing + Project
Road Name: Proposed SA-330 (Montecito Way Road Segment: Montecito Rd. - Montecito Ranch

Project Name: Montecito Ranch

SITE SPECIFIC II	NPUT DATA			IOISE	MODE	L INPUT	S	
Highway Data			Site Conditions	(Hard	= 10, So	oft = 15)		
Average Daily Traffic (Adt):	3,132 vehicles	S			Autos:	10		
Peak Hour Percentage:	10%	-	Medium Tr	ucks (2	2 Axles):	10		
Peak Hour Volume:	313 vehicles	8	Heavy Tru	•	•			
Vehicle Speed:	40 mph							
•	· ·		Vehicle Mix					
Near/Far Lane Distance:	12 feet		VehicleType	9	Day	Evening	Night	Daily
Site Data				Autos:	80.0%	7.0%	13.0%	95.00%
Barrier Height:	0.0 feet		Medium 7	rucks:	80.0%	7.0%	13.0%	4.00%
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy T	rucks:	80.0%	7.0%	13.0%	1.00%
Centerline Dist. to Barrier.	100.0 feet		Noise Source E	levatio	ns (in fe	eet)		
Centerline Dist. to Observer:	110.0 feet		Auto		0.000			
Barrier Distance to Observer:	10.0 feet	İ	Medium Truck		2.297			
Observer Height (Above Pad):	5.0 feet					Grade Ad	iustmont	
Pad Elevation:	0.0 feet		Heavy Truck	S. (3.006	Graue Au	justinent.	0.0
Road Elevation:	0.0 feet		Lane Equivalen	t Dista	nce (in f	feet)		
Road Grade:	0.0%		Auto	s: 10	9.950			
Left View:	-90.0 degree	es	Medium Truck	s: 10	9.869			
Right View:	90.0 degree		Heavy Truck	s: 10	9.877			
FHWA Noise Model Calculation	าร				in siene			
VehicleType REMEL	Traffic Flow	Distance	Finite Road	Fres	snel	Barrier Att	en Ber	m Atten

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-6.59	-3.49	0.00	-1.04	0.000	0.000
Medium Trucks:	77.72	-20.35	-3.49	0.00	-1.15	0.000	0.000
Heavy Trucks:	82.99	-26.37	-3.49	0.00	-1.43	0.000	0.000

Inmitigated Nois	e Levels (without	Topo and barri	er attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.4	54.7	50.1	48.0	56.0	56.3
Medium Trucks:	53.9	52.1	47.6	45.5	53.4	53.7
Heavy Trucks:	53.1	51.4	46.8	44.7	52.7	53.0
Vehicle Noise:	59.5	57.7	53.2	51.1	59.1	59.3

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	9	28	89	280
CNEL:	9	30	95	299

Scenario: Existing + Project

Road Name: Proposed SA-330 (Montecito Way Road Segment: Montecito Rd.- Main St. (SR-67)

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS							
Highway Data				S	Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt):	2,472 vehicle	s	į				Autos:	10			
Peak Houl	Percentage:	10%			$M\epsilon$	edium Ti	rucks (2	2 Axles):	10			
Peak H	Hour Volume:	247 vehicle	:S	THE PARTY OF THE P	He	avy Tru	icks (3-	+ Axles):	10			
Ve	ehicle Speed:	40 mph		L	Vehicle Mix							
Near/Far La	ane Distance:	12 feet				icleType		Day	Evening	Night	Daily	
Site Data							Autos:	80.0%		13.0%		
	rrior Hoights	0.0 feet			М	edium 1		80.0%		13.0%	4.00%	
Barrier Type (0-V	rrier Height:	0.0 feet 0.0				Heavy T		80.0%		13.0%	1.00%	
	ist. to Barrier:	100.0 feet				<u> </u>						
Centerline Dist.		110.0 feet		٨	loise So	ource E		ons (in fe	eet)			
Barrier Distance		10.0 feet				Auto		0.000				
Observer Height		5.0 feet				m Truck		2.297		_		
•	ad Elevation:	0.0 feet			Heav	/y Truck	(S:	8.006	Grade Adj	iustment	: 0.0	
	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Dista	nce (in t	feet)			
	Road Grade:	0.0%				Auto	s: 10	9.950				
	Left View:	-90.0 degre	es		Mediu	m Truck	<i>s:</i> 10	9.869				
	Right View:	90.0 degre	es		Heav	/y Truck	<i>s:</i> 10	9.877				
FHWA Noise Mod	el Calculations					· · · · · · · · · · · · · · · · · · ·						
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier Atte	en Ber	m Atten	
Autos:	66.51	-7.62		-3.49	i	0.00		-1.04	0.0	000	0.000	
Medium Trucks:	77.72	-21.37		-3.49	ı	0.00		-1.15	0.0	000	0.000	
Heavy Trucks:	82.99	-27.40		-3.49	I	0.00		-1.43	0.0	000	0.000	
Unmitigated Noise	e Levels (witho	ut Topo and	barri	er attenu	ıation)							
VehicleType	Leq Peak Hour			Leq Ev	ening	Leq	Night		Ldn		VEL	
Autos:	55.4		53.6		49.1		47	7.0	55.0		55.3	
Medium Trucks:	52.9		51.1		46.5			1.4	52.4		52.7	
Heavy Trucks:	52.1		50.3		45.8			3.7	51.7		52.0	
Vehicle Noise:	58.5	5	56.7		52.1		50	0.1	58.0)	58.3	
Centerline Distand	ce to Noise Cor	ntour (in feet)	70 /	D4	~-	4D 4		20 -ID 4		-/DA	
			l al	70 d	BA		dBA	6	60 dBA		dBA	
			Ldn:	7		4	22		70	2	21	

CNEL:

7

24

75

236

Scenario: Existing + Project
Road Name: Proposed SA-330 (Montecito Ran

Road Segment: Project West Access to Montecito

Project Name: Montecito Ranch

SITE SPECIFIC II	NPUT DATA	NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)							
Highway Data									
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	3,131 vehicles 10% 313 vehicles 40 mph	Autos: 10 Medium Trucks (2 Axles): 10 Heavy Trucks (3+ Axles): 10 Vehicle Mix							
Near/Far Lane Distance:	12 feet	VehicleType Day Evening Night Daily							
Site Data		Autos: 80.0% 7.0% 13.0% 95.00% Medium Trucks: 80.0% 7.0% 13.0% 4.00%							
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0	Heavy Trucks: 80.0% 7.0% 13.0% 1.00%							
Centerline Dist. to Barrier: Centerline Dist. to Observer:	100.0 feet 110.0 feet	Noise Source Elevations (in feet)							
Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	10.0 feet 5.0 feet 0.0 feet	Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0							
Road Elevation:	0.0 feet	Lane Equivalent Distance (in feet)							
Road Grade:	0.0%	Autos: 109.950 Medium Trucks: 109.869							
Left View: Right View:	-90.0 degrees 90.0 degrees	Heavy Trucks: 109.877							
FHWA Noise Model Calculation	es es es es es es es es es es es es es e								

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-6.59	-3.49	0.00	-1.04	0.000	0.000
Medium Trucks:	77.72	-20.35	-3.49	0.00	-1.15	0.000	0.000
Heavy Trucks:	82.99	-26.37	-3.49	0.00	-1.43	0.000	0.000

Unmitigated Nois	e Levels (without	Topo and barri	er attenuation)	A. 102-		
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.4	54.7	50.1	48.0	56.0	56.3
Medium Trucks:	53.9	52.1	47.6	45.5	53.4	53.7
Heavy Trucks:	53.1	51.4	46.8	44.7	52.7	53.0
Vehicle Noise:	59.5	57.7	53.2	51.1	59.1	59.3

/				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	9	28	88	280
CNEL:	9	30	95	299

Scenario: Existing + Project

Road Name: Proposed SA-330 (Montecito Ran Road Segment: Between Main Project Access Poi Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS							
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily	Traffic (Adt):	2,060 vehicle	s				Autos:	10		
Peak Hou	r Percentage:	10%			Medium	Trucks (2 Axles):	10		
Peak I	Hour Volume:	206 vehicles	s		Heavy T	rucks (3	+ Axles):	10		
Ve	ehicle Speed:	40 mph		Ve	ehicle Mix					
Near/Far La	ane Distance:	12 feet		70	VehicleTy	ne	Day	Evening	Night	Daily
Site Data				-	7 071101017	Autos:				95.00%
	rrior Hoight	0.0 feet		_	Medium				13.0%	
Barrier Height: Barrier Type (0-Wall, 1-Berm):		0.0 leet 0.0				Trucks:			13.0%	
	ist. to Barrier:	100.0 feet								
		110.0 feet		No	oise Source	Elevation	ons (in f	eet)		
	Centerline Dist. to Observer: Barrier Distance to Observer:				Au	tos:	0.000			
				Medium Tru	cks:	2.297				
Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet			Heavy True	cks:	8.006	Grade Ad	iustment	<i>:</i> 0.0		
	ad Elevation: ad Elevation:	0.0 feet 0.0 feet		Lane Equivalent Distance (in feet)						
				La			9.950	icely		
	Road Grade:	0.0%								
	Left View:	-90.0 degree			Medium True		9.869			
	Right View:	90.0 degree	es		Heavy True	<i>cks:</i> 10	9.877			
FHWA Noise Mod	lel Calculations	}								
VehicleType	REMEL	Traffic Flow	Distance	е	Finite Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos:	66.51	-8.41	-3	3.49	0.0	0	-1.04	0.0	000	0.000
Medium Trucks:	77.72	-22.17	-3	3.49	0.0	0	-1.15	0.0	000	0.000
Heavy Trucks:	82.99	-28.19	-3	3.49	0.0	0	-1.43	0.0	000	0.000
Unmitigated Noise	e Levels (witho	ut Topo and	barrier att	enua	ation)					
VehicleType	Leq Peak Hour	Leq Day	Leq	Eve	ning Le	q Night		Ldn	C	NEL
Autos:	54.6	3 :	52.8		48.3	4(6.2	54.2	2	54.5
Medium Trucks:	52.	1 :	50.3		45.7	4:	3.7	51.6	3	51.9
Heavy Trucks:	51.3	3	49.6		45.0	42	2.9	50.9)	51.2

Comtouling	Distance	to Maina	C	/! fa.al\
Centerline	Distance	to noise	Contour	un teeti
				1

57.7

55.9

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	6	18	58	184
CNEL:	6	20	62	197

49.3

51.4

57.2

57.5

Vehicle Noise:

Scenario: Existing + Project Project

Road Name: Ash St.

Road Segment: East Project Access - Pine St. (S

Project Name: Montecito Ranch

SITE SPECIFIC	INPUT DATA		NOISE MODEL INPUTS						
Highway Data			Site Condition	s (Hard	= 10, Sc	oft = 15)			
Average Daily Traffic (Adt): 2,795 vehicle	s			Autos:	10			
Peak Hour Percentage	e: 10%		Medium 7	rucks (2	? Axles):	10			
Peak Hour Volume	e: 280 vehicle	s	Heavy Tr	ucks (3+	Axles):	10			
Vehicle Speed	d: 40 mph		Vehicle Mix						
Near/Far Lane Distance	e: 12 feet	with the second	Vehicle Typ	10	Day	Evening	Night	Daily	
Site Data			v ernete i yp	Autos:	80.0%		13.0%		
V 444 V 444			Medium		80.0%		13.0%		
Barrier Height: 0.0 feet			Heavy		80.0%		13.0%	1.00%	
Barrier Type (0-Wall, 1-Berm			rieavy	rrucks.	00.070	7.070	10.070	1.0070	
Centerline Dist. to Barrie		Noise Source Elevations (in feet)							
Centerline Dist. to Observe		Autos: 0.000							
Barrier Distance to Observe			Medium Truc	ks: 2	2.297				
Observer Height (Above Pad			Heavy Truc	ks: 8	3.006	Grade Ad	justment	0.0	
Pad Elevation			l ana Farristala.	ot Dioto	/	fo.e.t\			
Road Elevation			Lane Equivalei			ieei)			
Road Grade			Autos: 109.950						
Left View		es	Medium Truc		9.869				
Right View	/: 90.0 degree	es	Heavy Truc	ks: 109	9.877				
FHWA Noise Model Calculate	ons				11.02				
VehicleType REMEL	Traffic Flow	Distance	Finite Road	Fres	snel	Barrier Att	en Ber	m Atten	
Autos: 66.	51 -7.08	-3.4	9 0.00		-1.04	0.0	000	0.000	
Medium Trucks: 77.	72 -20.84	-3.4	9 0.00	ı	-1.15	0.0	000	0.000	
Heavy Trucks: 82.	99 -26.86	-3.4	9 0.00	ı	-1.43	0.0	000	0.000	
Unmitigated Noise Levels (w	ithout Topo and	barrier atter	nuation)						

nmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	55.9	54.2	49.6	47.5	55.5	55.8					
Medium Trucks:	53.4	51.6	47.1	45.0	52.9	53.2					
Heavy Trucks:	52.6	50.9	46.3	44.2	52.2	52.5					
Vehicle Noise:	59.0	57.2	52.7	50.6	58.6	58.9					

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	8	25	79	250
CNEL:	8	27	84	267

Scenario: Existing + Project

Road Name: Ash St.

Road Segment: Pine St.(SR-78) - Elm St.

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Ad	lt):	676 vehicles				Autos:	10			
Peak Hour Percentag	ie:	10%		Мє	edium Truck	s (2 Axles):	10			
Peak Hour Volum	ur Volume: 68 vehicles			He	eavy Trucks	(3+ Axles):	10			
Vehicle Spee	ed:	40 mph	,	Vehicle	Miv					
Near/Far Lane Distand	e:	12 feet			nicleType	Day	Evening	Night	Daily	
Site Data				VCI	Auto			13.0%		
				M	edium Truci			13.0%		
Barrier Heigl		0.0 feet			Heavy Truci			13.0%		
Barrier Type (0-Wall, 1-Berr	•	0.0		•	ileavy iluci	15. 00.070	7.076	13.0%	1.00 %	
Centerline Dist. to Barrier: 100.0 feet				Noise S	ource Eleva	ations (in fe	eet)			
Centerline Dist. to Observ		110.0 feet			Autos:	0.000				
Barrier Distance to Observer: 10.0 feet				Medium Trucks: 2.297						
Observer Height (Above Pad): 5.0 feet					vy Trucks:	8.006	Grade Adj	iustment	: 0.0	
Pad Elevation	n:	0.0 feet								
Road Elevation	n:	0.0 feet		Lane Equivalent Distance (in feet)						
Road Grad	le:	0.0%		Autos: 109.950						
Left Vie	w: -	-90.0 degrees	S	Medium Trucks: 109.869						
Right Vie	w:	90.0 degrees	s	Hea	vy Trucks:	109.877				
FHWA Noise Model Calcula	tions									
VehicleType REMEL	T	raffic Flow	Distance	Finite	Road I	Fresnel	Barrier Atte	en Bei	rm Atten	
Autos: 66	.51	-13.25	-3.4	49	0.00	-1.04	0.0	00	0.000	
Medium Trucks: 77	.72	-27.01	-3.4	1 9	0.00	-1.15	0.0	00	0.000	
Heavy Trucks: 82	.99	-33.03	-3.4	1 9	0.00	-1.43	0.0	000	0.000	
Unmitigated Noise Levels (v	vithou	t Topo and b	arrier atte	nuation)						
VehicleType Leq Peak	Hour	Leq Day	Leq E	Evening	Leq Nig	ht	Ldn	C	NEL	
Autos:	49.8	4	8.0	43.5		41.4	49.3		49.6	
Medium Trucks:	47.2	4	5.5	40.9		38.8	46.8	}	47.1	

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	2	6	19	60
CNEL:	2	6	20	65

40.2

46.5

38.1

44.4

46.0

52.4

46.3

52.7

44.7

51.1

Heavy Trucks:

Vehicle Noise:

46.5

52.8

Scenario: Existing + Project Road Name: Montecito Rd.

Road Segment: Montecito Way - Davis St.

Project Name: Montecito Ranch

SITE	SPECIFIC IN	IPUT DATA		NOISE MODEL INPUTS								
Highway Data				Site Co	onditions (/Hard =	10, Sc	oft = 15)				
Average Daily	Traffic (Adt):	3,559 vehicles	S			,	Autos:	10				
-	Percentage:	10%		Medium Trucks (2 Axles): 10								
Peak I	Hour Volume:	356 vehicles	S	Heavy Trucks (3+ Axles): 10								
Ve	ehicle Speed:	40 mph		Vehicle Mix								
Near/Far La	ane Distance:	12 feet	Pol		ehicleType		Day	Evening	Night	Daily		
Site Data							80.0%		13.0%			
Ra	rrier Height:	0.0 feet			Medium Tr	ucks:	80.0%	7.0%	13.0%	4.00%		
Barrier Type (0-V	•	0.0			Heavy Tr	ucks:	80.0%	7.0%	13.0%	1.00%		
,, ,	ist. to Barrier.	100.0 feet		Noise	Source Ele	evation	s (in fe	eet)				
Centerline Dist. to Observer: 110.0 feet					Autos		000					
Barrier Distance to Observer: 10.0 feet				Moo	Autos lium Trucks		297					
Observer Height	(Above Pad):	5.0 feet						Grada Ad	iuetmant			
P	ad Elevation:	0.0 feet		Heavy Trucks: 8.006 Grade Adjustment: 0.0						. 0.0		
Ro	ad Elevation:	0.0 feet		Lane E	Equivalent	Distand	ce (in i	feet)				
	Road Grade:	0.0%			Autos	: 109.	950					
	Left View:	-90.0 degree	es	Mea	lium Trucks	: 109.	869					
	Right View:	90.0 degree	es	He	avy Trucks	: 109.	877					
FHWA Noise Mod	lel Calculation	s	<u>.</u> i							<u></u>		
VehicleType	REMEL	Traffic Flow	Distance	Fini	ite Road	Fresn	el	Barrier Att	en Bei	m Atten		
Autos:	66.51	-6.04	-3.4	19	0.00		-1.04	0.0	000	0.000		
Medium Trucks:	77.72	-19.79	-3.4	19	0.00		-1.15	0.0	000	0.000		
Heavy Trucks:	82.99	-25.81	-3.4	19	0.00		-1.43	0.0	000	0.000		
Unmitigated Nois	e Levels (with	out Topo and	barrier atte	nuation	1)	Maria Laborator Alfrago						

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	57.0	55.2	50.7	48.6	56.5	56.8
Medium Trucks.	54.4	52.7	48.1	46.0	54.0	54.3
Heavy Trucks:	53.7	51.9	47.4	45.3	53.3	53.5
Vehicle Noise:	60.0	58.3	53.7	51.6	59.6	59.9

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	10	32	101	318						
CNEL:	11	34	108	340						

Scenario: Existing + Project Road Name: Montecito Rd.

Road Segment: Davis St. - Main St. (SR-67)

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE	SITE SPECIFIC INPUT DATA					NC	DISE MODE	L INPUT	S			
Highway Data				S	Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt):	6,059 vehicle	:S				Autos:	10				
Peak Hou	r Percentage:	10%			Medium Trucks (2 Axles): 10							
Peak I	Hour Volume:	606 vehicle	s		Heavy Trucks (3+ Axles): 10							
Ve	ehicle Speed:	40 mph		V	Vehicle Mix							
Near/Far La	ane Distance:	12 feet		7		icleType	Day	Evening	Night	Daily		
Site Data					Autos: 80.0% 7.0%							
	rrier Height:	0.0 feet			Ме	edium Tru			13.0% 13.0%	4.00%		
Barrier Type (0-V	•	0.0 leet				leavy Tru			13.0%	1.00%		
• • •	ist. to Barrier:	100.0 feet										
Centerline Dist.		110.0 feet		N	oise Sc	ource Ele	vations (in f	eet)				
Barrier Distance		10.0 feet		B.		Autos:	0.000					
					Mediui	n Trucks:	2.297					
Observer Height	•	5.0 feet			Heav	y Trucks:	8.006	Grade Ad	ljustment.	: 0.0		
Pad Elevation: 0.0 feet Road Elevation: 0.0 feet			1 :	ane Fai	ıivalent l	Distance (in	foot)					
	Road Grade:	0.0 feet 0.0%			anc Eq.	Autos:		iccij				
	Left View:				Madiuu							
		-90.0 degree			Medium Trucks: 109.869 Heavy Trucks: 109.877							
	Right View:	90.0 degree	es		пеач	y Trucks.	109.077					
FHWA Noise Mod	lel Calculations	S										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten		
Autos:	66.51	-3.72		-3.49		0.00	-1.04	0.0	000	0.000		
Medium Trucks:	77.72	-17.48		-3.49		0.00	-1.15	0.0	000	0.000		
Heavy Trucks:	82.99	-23.50		-3.49		0.00	-1.43	0.0	000	0.000		
Unmitigated Noise	e Levels (witho	out Topo and	barrie	er attenu	ation)							
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Eve	ening	Leq N	ight	Ldn	CI	VEL		
Autos:	59.	3	57.5		53.0		50.9	58.9	9	59.2		
Medium Trucks:	56.	7	55.0		50.4		48.3	56.3	3	56.6		
Heavy Trucks:	56.	0	54.2	49.7 47.6 55.6				3	55.9			
Vehicle Noise:	62.	4	60.6		56.0		54.0	61.9	9	62.2		

70 dBA

17

18

Ldn:

CNEL:

65 dBA

54

58

60 dBA

171

183

55 dBA

541

579

Centerline Distance to Noise Contour (in feet)

Scenario: Existing + Project + Cumulative

Road Name: SR-78

Road Segment: Ash St. - Haverford Rd.

63.0

61.3

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE	SPECIFIC INP	UT DATA		NOISE MODEL INPUTS						
Highway Data				Site Cor	nditions ((Hard = 10, Sc	oft = 15)		Maria (1990) (1990) (1990) (1990)	
Average Daily	Traffic (Adt): 14	,485 vehicles	3			Autos:	10			
Peak Hour	Percentage:	10%		Me	edium Tru	icks (2 Axles):	10			
Peak H	lour Volume: 1	,448 vehicles	3	He	eavy Truc	ks (3+ Axles):	10			
Ve	hicle Speed:	40 mph		Vehicle	Miy					
Near/Far La	ne Distance:	12 feet		1	icleType	Day	Evening	Night	Daily	
Site Data		Management of the Control of the Con				utos: 80.0%		13.0%		
Bai	rrier Height:	0.0 feet		М	ledium Tr	ucks: 80.0%	7.0%	13.0%	4.00%	
Barrier Type (0-W	•	0.0			Heavy Tr	ucks: 80.0%	7.0%	13.0%	2.00%	
Centerline Di	st. to Barrier:	100.0 feet		Noise S	ource Ele	evations (in fe	eet)			
Centerline Dist.	to Observer:	110.0 feet			Autos					
Barrier Distance to Observer: 10.0 feet				Mediu	m Trucks					
Observer Height ((Above Pad):	5.0 feet			vy Trucks		Grade Adj	ustment:	0.0	
Pá	ad Elevation:	0.0 feet								
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distance (in	feet)			
I	Road Grade:	0.0%			Autos	: 109.950				
	Left View:	-90.0 degree	es	Mediu	m Trucks	s: 109.869				
	Right View:	90.0 degree	es	Hea	vy Trucks	s: 109.877				
FHWA Noise Mode	el Calculations									
VehicleType	REMEL 7	raffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Beri	m Atten	
Autos:	66.51	0.01	-3.	49	0.00	-1.04	0.0	00	0.000	
Medium Trucks:	77.72	-13.70	-3.	49	0.00	-1.15	0.0	00	0.000	
Heavy Trucks:	82.99	-16.71	-3.	49	0.00	-1.43	0.0	000	0.000	
Unmitigated Noise	e Levels (withou	ıt Topo and ı	barrier atte	enuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq	Evening	Leq l	Vight	Ldn	CI	VEL	

Medium Trucks:	60.5	58.8	54.2	52.1	60.1	60.4
Heavy Trucks:	62.8	61.0	56.5	54.4	62.4	62.7
Vehicle Noise:	67.0	65.3	60.7	58.6	66.6	66.9
Centerline Distance to	Noise Contour (in feet)				
			70 dBA	65 dBA	60 dBA	55 dBA

56.7

Ldn: 50 159 1,587 502 CNEL: 1,698 54 170 537

54.6

62.6

62.9

Autos:

Scenario: Existing + Project + Cumulative

Road Name: SR-78

Road Segment: Ash St. - Olive St.

Project Name: Montecito Ranch

SITE	SPECIFIC IN	NPUT DATA		NOISE MODEL INPUTS								
Highway Data				Site Conditions	(Hard	= 10, Sc	oft = 15)					
Average Daily	Traffic (Adt):	19,100 vehicles	;			Autos:	10					
Peak Hour	Percentage:	10%		Medium T	rucks (2	2 Axles):	10					
Peak F	lour Volume:	1,910 vehicles	;	Heavy Tru	ıcks (3-	+ Axles):	10					
Ve	hicle Speed:	40 mph		Vehicle Mix								
Near/Far La	ne Distance:	12 feet		VehicleTyp	e	Day	Evening	Night	Daily			
Site Data					Autos:	80.0%	7.0%	13.0%	94.00%			
Ra	rrier Height:	0.0 feet		Medium 7	Trucks:	80.0%	7.0%	13.0%	4.00%			
Barrier Type (0-W	•	0.0		Heavy T	Trucks:	80.0%	7.0%	13.0%	2.00%			
	st. to Barrier.	100.0 feet		Noise Source E	levatio	nns (in fa	opt)					
Centerline Dist.	to Observer:	110.0 feet		Auto		0.000			,			
Barrier Distance	to Observer:	10.0 feet		Medium Truci		2.297						
Observer Height	(Above Pad):	5.0 feet					Grade Ad	iustmont	. 0 0			
-	ad Elevation:	0.0 feet		Heavy Truci	KS.	8.006	Grade Au	justinent.	0.0			
Ro	ad Elevation:	0.0 feet		Lane Equivaler	nt Dista	nce (in i	feet)					
,	Road Grade:	0.0%		Auto	os: 10	9.950						
	Left View:	-90.0 degree	s	Medium Truci	ks: 10	9.869						
	Right View:	90.0 degree		Heavy Truci	<i>ks:</i> 10	9.877						
FHWA Noise Mod	el Calculation	ıs										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fre	snel	Barrier Att	en Ber	m Atten			
A	CC E1	1 22	2.4	0.00		1.04	^ /	200	0.000			

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	1.22	-3.49	0.00	-1.04	0.000	0.000
Medium Trucks:	77.72	-12.50	-3.49	0.00	-1.15	0.000	0.000
Heavy Trucks:	82.99	-15.51	-3.49	0.00	-1.43	0.000	0.000

nmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	64.2	62.5	57.9	55.8	63.8	64.1					
Medium Trucks:	61.7	60.0	55.4	53.3	61.3	61.6					
Heavy Trucks:	64.0	62.2	57.7	55.6	63.6	63.9					
Vehicle Noise:	68.2	66.5	61.9	59.8	67.8	68.1					

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	66	209	662	2,093						
CNEL:	71	224	708	2,239						

Scenario: Existing + Project + Cumulative

Road Name: SR-78

Road Segment: Olive St. - Main St. (SR-67)

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE	SPECIFIC IN	PUT DATA		NOISE MODEL INPUTS							
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt): 1	9,130 vehicles	3				Autos:	10			
Peak Hour	Percentage:	10%		Medium Trucks (2 Axles): 10							
Peak H	Hour Volume:	1,913 vehicles	Heavy Trucks (3+ Axles): 10								
Ve	ehicle Speed:	40 mph	Ī	Vehicle	Miv						
Near/Far La	ane Distance:	12 feet	:		nicleType	1	Day	Evening	Night	Daily	
Site Data					A	utos:	80.0%	7.0%	13.0%	94.00%	
Ra	rrier Height:	0.0 feet		N	ledium Tr	ucks:	80.0%	7.0%	13.0%	4.00%	
Barrier Type (0-V	_	0.0			Heavy Tri	ucks:	80.0%	7.0%	13.0%	2.00%	
Centerline Di	ist. to Barrier.	100.0 feet		Noise S	ource Ele	vatio	ns (in fa	eet)			
Centerline Dist. to Observer: 110.0 feet				110100 0	Autos		.000	,,			
Barrier Distance to Observer: 10.0 feet				Medii	m Trucks		.297				
Observer Height	(Above Pad):	5.0 feet			vy Trucks		.006	Grade Ad	liustment	. 0 0	
P	ad Elevation:	0.0 feet					.000	Grado / la			
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distai	nce (in i	feet)			
	Road Grade:	0.0%			Autos	: 109	.950				
	Left View:	-90.0 degree	es	Mediu	ım Trucks	: 109	.869				
	Right View:	90.0 degree	es	Hea	vy Trucks	: 109	0.877				
FHWA Noise Mod	lel Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten	
Autos:	66.51	1.22	-3.4	19	0.00		-1.04	0.0	000	0.000	
Medium Trucks:	77.72	-12.49	-3.4	19	0.00		-1.15	0.0	000	0.000	
Heavy Trucks:	82.99	-15.50	-3.4	19	0.00		-1.43	0.0	000	0.000	
Unmitigated Nois	e Levels (witho	ut Topo and l	barrier atte	nuation)	4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5						
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq N	light		Ldn	C	NEL	

Centerline Distance to Noise Contour (in feet)	70 dBA 65 dBA 60 dBA 55 dB Ldn: 66 210 663 2,096							
	70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:	66	210	663	2,096				
CNFI ·	71	224	709	2 242				

57.9

55.4

57.7

61.9

55.8

53.3

55.6

59.8

63.8

61.3

63.6

67.8

64.1

61.6

63.9

68.1

62.5

60.0

62.2

66.5

Autos:

Medium Trucks:

Heavy Trucks:

Vehicle Noise:

64.2

61.7

64.0

68.2

Scenario: Existing + Project + Cumulative

Road Name: 10th St.

Road Segment: Main St. (SR-67) - H St.

Project Name: Montecito Ranch

Job Number: 4568

Analyst: A. Stalker

SITE	SPECIFIC IN	PUT DATA		NOISE MODEL INPUTS							
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt): 1	8,535 vehicle	:S				lutos:	10			
• •	Percentage:	10%		Me	edium Tru	icks (2 A	xles):	10			
Peak F	Hour Volume:	1,853 vehicle	s	He	eavy Truc	ks (3+ A	xles):	10			
Ve	ehicle Speed:	40 mph		Vehicle	Alix						
Near/Far La	ne Distance:	12 feet			iviix nicleType		Day	Evening	Night	Daily	
Site Data				VEI			30.0%	L	13.0%		
					۔ ledium Tr		30.0% 30.0%		13.0%		
	rrier Height:	0.0 feet			Heavy Tr		30.0 % 30.0%		13.0%		
Barrier Type (0-W	•	0.0		,	ricavy ii	dons.	30.0 /	7.070	13.070	1.0070	
Centerline Di		100.0 feet		Noise S	ource El	evations	(in f	eet)			
Centerline Dist.		110.0 feet			Autos	s: 0.0	00				
Barrier Distance		10.0 feet		Mediu	ım Trucks	s: 2.2	97				
Observer Height	(Above Pau): ad Elevation:	5.0 feet		Hea	vy Trucks	s: 8.0	06	Grade Adj	iustmen	t: 0.0	
	ad Elevation: ad Elevation:	0.0 feet 0.0 feet		I ane Fo	uivalent	Dietano	e (in	foot)			
	Road Grade:	0.0 feet 0.0%		Lanc Lq	Autos			iccij		· · · · · · · · · · · · · · · · · · ·	
•	Left View:	-90.0 degree	00	Mediu	ım Trucks						
	Right View:	90.0 degree			vy Trucks						
	riigiii view.	oo.o dogre	C G	,,,,	ry maone						
FHWA Noise Mod	el Calculations		_								
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	Road	Fresne	e/	Barrier Att	en Be	rm Atten	
Autos:	66.51	1.13	-	3.49	0.00	-	1.04	0.0	000	0.000	
Medium Trucks:	77.72	-12.63	-	3.49	0.00	-	1.15	0.0	000	0.000	
Heavy Trucks:	82.99	-18.65	-	3.49	0.00	-	1.43	0.0	000	0.000	
Unmitigated Noise	e Levels (witho	ut Topo and	barrier a	ttenuation)							
VehicleType	Leq Peak Hour			q Evening	Leq I	Vight		Ldn	С	NEL	
Autos:	64.2	2	62.4	57.8		55.7		63.7	,	64.0	
Medium Trucks:	61.6	3	59.8	55.3		53.2		61.2	2	61.5	
Heavy Trucks:	60.9)	59.1	54.5		52.5		60.4	ļ	60.7	
Vehicle Noise:	67.2	2	65.5	60.9		58.8		66.8	3	67.1	
Centerline Distand	ce to Noise Cor	ntour (in feet			I						
				70 dBA	65 0		ϵ	60 dBA		dBA	
			Ldn:	52	16			524		656	
		Cl	VEL:	56	. 17	7		560	1,	772	

Scenario: Existing + Project + Cumulative

Road Name: Main St. (SR-78) Road Segment: 7th St. - 3rd St. Project Name: Montecito Ranch

SITE S	SPECIFIC IN	IPUT DATA		NOISE MODEL INPUTS							
Highway Data			Si	Site Conditions (Hard = 10, Soft = 15)							
Average Daily	, ,	·	3	Martines Ten	Autos:						
Peak H Vei	Percentage: lour Volume: hicle Speed:	10% 3,068 vehicles 55 mph		Medium Trucks (2 Axles): 10 Heavy Trucks (3+ Axles): 10 Vehicle Mix							
Near/Far Lai	ne Distance:	12 feet		VehicleType	Day	Evening	Night	Daily			
Site Data Bar Barrier Type (0-W	rrier Height: 'all, 1-Berm):	0.0 feet 0.0		A Medium Tro Heavy Tro		7.0%	13.0% 13.0% 13.0%	4.00%			
Centerline Dist Centerline Dist. Barrier Distance Observer Height (A	to Observer: to Observer:	100.0 feet 110.0 feet 10.0 feet 5.0 feet 0.0 feet	Ne	oise Source Ele Autos Medium Trucks Heavy Trucks	0.000 2.297	eet) Grade Adju	ustment	: 0.0			
	ad Elevation: Road Grade: Left View:	0.0 feet 0.0% -90.0 degree	es	ane Equivalent Autos Medium Trucks	109.950	feet)					
FHWA Noise Mode				Heavy Trucks							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte		m Atten			
Autos:	71.78	1.89	-3.49	0.00	-1.04	0.0	00	0.000			
Medium Trucks:	82.40	-11.82	-3.49	0.00	-1.15	0.0	00	0.000			
Heavy Trucks:	86.40	-14.83	-3.49	0.00	-1.43	0.0	00	0.000			

Unmitigated Nois	e Levels (without	Topo and barri	er attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos	70.2	68.4	63.9	61.8	69.7	70.0
Medium Trucks	67.1	65.3	60.8	58.7	66.7	67.0
Heavy Trucks.	68.1	66.3	61.8	59.7	67.6	67.9
Vehicle Noise	73.4	71.7	67.1	65.0	73.0	73.3

Centerline Distance to Noise Contour (in feet)					
	70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:	219	691	2,185	6,911	
CNEL:	234	739	2.338	7.393	

Scenario: Existing + Project + Cumulative

Road Name: Main St. (SR-67)
Road Segment: 10th St. - Montecito Rd.

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE	SPECIFIC INP	UT DATA		NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)							
Highway Data											
Average Daily	Traffic (Adt): 37	,292 vehicles	3			Aut	os: 10				
Peak Hour	Percentage:	10%		Me	dium Truci	ks (2 Axle	es): 10				
Peak H	our Volume: 3	,729 vehicles	5	He	avy Trucks	6 (3+ Axle	es): 10				
	nicle Speed:	55 mph		Vehicle i	Mix						
Near/Far Lar	ne Distance:	12 feet		Veh	icleType	Da	y Evening	Night	Daily		
Site Data					Aut	<i>tos:</i> 80.	0% 7.0%	13.0%	94.00%		
Bar	rier Height:	0.0 feet		M	edium Truc	cks: 80.	0% 7.0%	13.0%	4.00%		
Barrier Type (0-W	•	0.0		1	Heavy Truc	:ks: 80.	0% 7.0%	13.0%	2.00%		
Centerline Dis	•	100.0 feet		Noise So	ource Elev	ations (i	n feet)				
Centerline Dist. to Barrier Distance to Observer Height (A	o Observer:	110.0 feet 10.0 feet 5.0 feet 0.0 feet		Mediu	Autos: m Trucks: ry Trucks:	0.000 2.297 8.006		djustment	: 0.0		
		I ane Fo	uivalent D	istance (in feet)						
	d Elevation: Road Grade:	0.0 feet 0.0%	-		Autos:	109.950					
,		-90.0 degree		Mediu	m Trucks:	109.869					
	Right View:	90.0 degree			y Trucks:	109.877					
FHWA Noise Mode	l Calculations		.								
VehicleType	REMEL 7	raffic Flow	Distance	Finite	Road	Fresnel	Barrier A	tten Bei	m Atten		
Autos:	71.78	2.74	-3.4	19	0.00	-1.0	04 0	.000	0.000		
Medium Trucks:	82.40	-10.97	-3.4	19	0.00	-1.	<i>15</i> 0	.000	0.000		
Heavy Trucks:	86.40	-13.98	-3.4	19	0.00	-1.4	<i>43</i> 0	.000	0.000		
Unmitigated Noise	Levels (withou	t Topo and b	barrier atte	nuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq Nig	ght	Ldn	C	NEL		
Autos:	71.0	6	9.3	64.7		62.6	70	.6	70.9		
Medium Trucks:	67.9	6	6.2	61.6		59.5	67	.5	67.8		
Heavy Trucks:	68.9	6	37.2	62.6		60.5	68	.5	68.8		
Vehicle Noise:	74.3	7	2.5	67.9		65.9	73	.8	74.1		

70 dBA

266

284

Ldn:

CNEL:

65 dBA

840

899

60 dBA

2,656

2,842

55 dBA

8,400

8,986

Scenario: Existing + Project + Cumulative

Road Name: Main St. (SR-67)

Road Segment: Montecito Rd. - Hunter St.

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE S	SITE SPECIFIC INPUT DATA						NOISE MODEL INPUTS								
Highway Data					Site Con	ditions ((Hard = 10, S	oft = 15)							
Average Daily T	raffic (Adt): 3	4,562 vehicle	s				Autos	: 10							
Peak Hour P	Percentage:	10%			Me	dium Tru	icks (2 Axles,	: 10							
Peak Ho	ur Volume:	3,456 vehicle	s	İ	He	avy Truc	ks (3+ Axles)	: 10							
Vehi	icle Speed:	55 mph		-	Vehicle I	Miv									
Near/Far Lane	e Distance:	12 feet		1		cleType	Day	Evening	Night	Daily					
Site Data		,			• • • • • • • • • • • • • • • • • • • •		utos: 80.09		13.0%						
	ior Uoimbt.	0.0 foot			Me	edium Tr			13.0%						
	ier Height:	0.0 feet 0.0				leavy Tr			13.0%						
Barrier Type (0-Wa Centerline Dist	•	0.0 100.0 feet													
					Noise Sc	urce Ele	evations (in	feet)							
Centerline Dist. to		110.0 feet				Autos	0.000								
Barrier Distance to		10.0 feet			Mediui	n Trucks	s: 2.297								
Observer Height (A	· ·	5.0 feet			Heav	y Trucks	s: 8.006	Grade Ad	justment	: 0.0					
	l Elevation:	0.0 feet				.ialamt	Dietomos /im	£0.04\							
	l Elevation:	0.0 feet		<u> </u>	Lane Equ		Distance (in	reet)							
Ro	oad Grade:	0.0%				Autos									
	Left View:	-90.0 degree	es			n Trucks									
F	Right View:	90.0 degree	es		Heav	y Trucks	: 109.877								
FHWA Noise Model	Calculations			<u> </u>											
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten					
Autos:	71.78	2.41		-3.4	9	0.00	-1.04	0.0	000	0.000					
Medium Trucks:	82.40	-11.30		-3.4	9	0.00	-1.15	0.0	000	0.000					
Heavy Trucks:	86.40	-14.31		-3.4	9	0.00	-1.43	0.0	000	0.000					
Unmitigated Noise L	Levels (witho	ut Topo and	barrie	er atten	uation)	WW.									
VehicleType L	eq Peak Houi	Leq Day	•	Leq E	vening	Leq l	Vight	Ldn	CI	NEL					
Autos:	70.	7	68.9		64.4		62.3	70.3	3	70.6					
Medium Trucks:	67.0	6	65.9		61.3		59.2	67.2	2	67.5					
Heavy Trucks:	68.0	3	66.8		62.3		60.2	68.2	2	68.5					
Vehicle Noise:	73.	2	72.2		67.6		65.5	73.5		73.8					

70 dBA

246

263

Ldn:

CNEL:

65 dBA

779

833

60 dBA

2,462

2,634

55 dBA

7,785

8,328

Centerline Distance to Noise Contour (in feet)

Scenario: Existing + Project + Cumulative

Road Name: Main St. (SR-67)

Road Segment: Hunter St.- Proposed SA-330

Project Name: Montecito Ranch

Job Number: 4568

Analyst: A. Stalker

SITE	SPECIFIC INF	PUT DATA				NC	ISE	MODE	L INPUT	S	
Highway Data				S	Site Con	ditions (F	lard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 35	5,514 vehicle	S					Autos:	10		
Peak Hou	r Percentage:	10%			Me	dium Truc	ks (2	Axles):	10		
Peak H	Hour Volume: 3	3,551 vehicle	s		He	avy Truck	s (3+	Axles):	10		
Ve	ehicle Speed:	40 mph		L	'ehicle l	/liv					
Near/Far La	ane Distance:	12 feet		_		cleType		Day	Evening	Night	Daily
Site Data							itos:	80.0%		13.0%	
	rrior Hoight	0.0 foot			Ме	edium Tru		80.0%		13.0%	
Barrier Type (0-V	rrier Height:	0.0 feet 0.0				leavy Tru		80.0%		13.0%	
• • •	•	100.0 feet									
Centerline Dist.		110.0 feet		٨	loise So	urce Ele	vatio	ns (in fe	et)		
Barrier Distance		10.0 feet				Autos:		.000			
Observer Height		5.0 feet			Mediur	n Trucks:	2	.297			
_	ad Elevation:	0.0 feet			Heav	y Trucks:	8	.006	Grade Ad	iustmen	t: 0.0
	ad Elevation: ad Elevation:	0.0 feet		1	ane Fai	ıivalent L	Distai	nce (in i	feet)		
	au Lievalion. Road Grade:	0.0%		-	ano Equ	Autos:		0.950			
	Left View:	-90.0 degree	26		Mediur	n Trucks:		0.869			
	Right View:	90.0 degree				y Trucks:).877			
	riigiit view.	Jo.o degree			riouv	y Tracke.	100				
FHWA Noise Mod	el Calculations			.,							
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	3.91		-3.49)	0.00		-1.04	0.0	000	0.00
Medium Trucks:		-9.80		-3.49	1	0.00		-1.15	0.0	000	0.00
Heavy Trucks:	82.99	-12.81		-3.49	•	0.00		-1.43	0.0	000	0.00
Unmitigated Noise	e Levels (withou	ıt Topo and	barrio	er attenu	uation)						
VehicleType	Leq Peak Hour	Leq Day	,	Leq Ev	ening	Leq N	ight		Ldn	C	NEL
Autos:	66.9		65.2		60.6		58	.5	66.5	5	66.8
Medium Trucks:	64.4		62.7		58.1		56	.0	64.0)	64.3
Heavy Trucks:	66.7		64.9		60.4		58.	.3	66.3	3	66.
Vehicle Noise:	70.9	(69.2		64.6		62	.5	70.5	5	70.8
Centerline Distanc	ce to Noise Con	tour (in feet)								
				70 di	BA	65 dE	3 <i>A</i>	6	0 dBA	55	5 dBA
			Ldn:	123	3	389)		1,231	3	,892
		CI	VEL:	132)	416	}		1,316	4	,163

Scenario: Existing + Project + Cumulative

Road Name: Main St. (SR-67)

Road Segment: Proposed SA-330 - Highland Vall

Project Name: Montecito Ranch

SITE S	PECIFIC IN	IPUT DATA		NOISE MODEL INPUTS							
Highway Data			5	ite Conditions	(Hard = 10, S	oft = 15)					
Average Daily 1	raffic (Adt):	36,338 vehicles	;		Autos.	10					
Peak Hour I	Percentage:	10%		Medium Tr	ucks (2 Axles)	: 10					
Peak Ho	our Volume:	3,634 vehicles	3	Heavy Tru	cks (3+ Axles)	: 10					
Veh	icle Speed:	40 mph	1	ehicle Mix							
Near/Far Lan	e Distance:	12 feet		VehicleType	e Day	Evening	Night	Daily			
Site Data					Autos: 80.0%		13.0%				
	viau Haimbt.	0.0 foot		Medium T			13.0%	4.00%			
Barrier Type (0-Wa	r ier Height: all 1-Berm):	0.0 feet 0.0		Heavy T			13.0%	2.00%			
Centerline Dis	t. to Barrier.	100.0 feet	^	loise Source E	levations (in f	eet)					
Centerline Dist. t		110.0 feet		Auto	s: 0.000						
Barrier Distance to		10.0 feet		Medium Truck	s: 2.297						
Observer Height (A	•	5.0 feet		Heavy Truck	s: 8.006	Grade Ad	justment	0.0			
	d Elevation:	0.0 feet	<u> </u>			6 1)					
	d Elevation:	0.0 feet	L	ane Equivalent		teet)					
R	oad Grade:	0.0%		Auto							
	Left View:	-90.0 degree	s	Medium Truck	s: 109.869						
	Right View:	90.0 degree	s	Heavy Truck	s: 109.877						
FHWA Noise Mode	l Calculations	S									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Att	en Ber	m Atten			
Autos:	66.51	4.01	-3.49	0.00	-1.04	0.0	000	0.000			
Medium Trucks:	77.72	-9.70	-3.49	0.00	-1.15	0.0	000	0.000			
Heavy Trucks:	82.99	-12.71	-3.49	0.00	-1.43	0.0	000	0.000			

Unmitigated Nois	se Levels (without	Topo and barri	er attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos	: 67.0	65.3	60.7	58.6	66.6	66.9
Medium Trucks	: 64.5	62.8	58.2	56.1	64.1	64.4
Heavy Trucks	: 66.8	65.0	60.5	58.4	66.4	66.6
Vehicle Noise	: 71.0	69.3	64.7	62.6	70.6	70.9

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	126	398	1,259	3,982
CNEL:	135	426	1.347	4.260

Scenario: Existing + Project + Cumulative Road Name: Main St. (SR-67) Road Segment: Highland Valley Rd.- Archie Moor

Project Name: Montecito Ranch

Job Number: 4568

Analyst: A. Stalker

SITE	SPECIFIC IN	PUT DATA			NOISE MODEL INPUTS							
Highway Data				5	Site Con	ditions (Ha	rd = 10, Se	oft = 15)				
Average Daily	Traffic (Adt): 3	4,456 vehicle	s				Autos:	10				
Peak Hou	r Percentage:	10%			Me	dium Trucks	s (2 Axles).	10				
Peak I	Hour Volume:	3,446 vehicle	s		He	avy Trucks	(3+ Axles):	10				
Ve	ehicle Speed:	40 mph		1	/ehicle l	Miv				· · · · · · · · · · · · · · · · · · ·		
Near/Far La	ane Distance:	12 feet				icleType	Day	Evening	Night	Daily		
Site Data					VCIII	Auto			13.0%			
	uuiou Uoiahti	0.0 foot			Me	edium Truck			13.0%			
Ваrrier Туре (0-V	rrier Height:	0.0 feet 0.0				leavy Truck			13.0%			
•• •	ist. to Barrier:	0.0 100.0 feet							, .			
Centerline Dist.		110.0 feet		٨	loise Sc	urce Eleva	tions (in f	eet)				
Barrier Distance		10.0 feet				Autos:	0.000					
Observer Height		5.0 feet			Mediui	n Trucks:	2.297					
•	(Above r ad). Pad Elevation:	0.0 feet			Heav	y Trucks:	8.006	Grade Adj	ustment	: 0.0		
	ad Elevation: ad Elevation:	0.0 feet		L	ane Ea	uivalent Dis	stance (in	feet)				
	Road Grade:	0.0%					109.950	,		* ***		
	Left View:	-90.0 degree	25		Mediui		109.869					
	Right View:	90.0 degree			Heav	ry Trucks:	109.877					
FHWA Noise Mod	lel Calculations											
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road F	resnel	Barrier Atte	en Ber	m Atten		
Autos:	66.51	3.78		-3.49		0.00	-1.04	0.0	00	0.000		
Medium Trucks:	77.72	-9.93		-3.49)	0.00	-1.15	0.0	00	0.000		
Heavy Trucks:	82.99	-12.94		-3.49)	0.00	-1.43	0.0	00	0.000		
Unmitigated Noise	e Levels (witho	ut Topo and	barrie	r atteni	uation)							
VehicleType	Leq Peak Hour	Leq Day		Leq Ev	ening	Leq Nigl	nt	Ldn	CI	NEL		
Autos:	66.8	3 (35.0		60.5		58.4	66.4		66.7		
Medium Trucks:		3 (32.5		58.0		55.9	63.9)	64.1		
Heavy Trucks:	66.6	6 (34.8		60.2		58.2	66.1		66.4		
Vehicle Noise:	70.8	3 (39.0		64.5		62.4	70.4		70.6		
Centerline Distant	ce to Noise Cor	ntour (in feet))									
			İ	70 d		65 dBA	. 6	60 dBA	55	dBA		
			Ldn:	119		378		1,194	•	776		
		CN	IEL:	128	3	404		1,277	4,	039		

Scenario: Existing + Project + Cumulative Road Name: Main St. (SR-67)

Road Segment: Archie Moore Rd. - Poway Rd

Project Name: Montecito Ranch

SITE	SPECIFIC II	NPUT DATA		NOISE MODEL INPUTS						
Highway Data				Si	te Conditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	35,686 vehicle	s				Autos:	10		
Peak Hou	r Percentage:	10%			Medium T	rucks (2	2 Axles):	10		
Peak I	Hour Volume:	3,569 vehicle	3,569 vehicles		Heavy Tru	ıcks (3-	+ Axles):	10		
Ve	ehicle Speed:	40 mph		V	ehicle Mix					- Company of the Comp
Near/Far La	ane Distance:	12 feet		~ ~	VehicleTyp	e	Day	Evening	Night	Daily
Site Data										
Ra	rrier Height:	0.0 feet			Medium 7	Trucks:	80.0%	7.0%	13.0%	4.00%
Barrier Type (0-V	•	0.0			Heavy T	Trucks:	80.0%	7.0%	13.0%	2.00%
, , ,	ist. to Barrier:	100.0 feet	-			-1 4.1				
Centerline Dist.		110.0 feet		N	oise Source E			et)		
Barrier Distance to Observer: 10.0 feet				Auto		0.000				
Observer Height		5.0 feet		Medium Trucks: 2.297 Heavy Trucks: 8,006 Grade Adjustment: 0.0						
_	Pad Elevation:	0.0 feet			Heavy Truck	ks:	8.006	Grade Adj	ustment	: 0.0
Ro	ad Elevation:	0.0 feet		Lá	ane Equivalen	nt Dista	nce (in	feet)		
	Road Grade:	0.0%	-		Auto	os: 10	9.950			
	Left View:	-90.0 degree	es		Medium Truck	ks: 10	9.869			
	Right View:	90.0 degree	es		Heavy Truck	ks: 10	9.877			
FHWA Noise Mod	lel Calculation	ns							<u>.</u>	
VehicleType	REMEL	Traffic Flow	Distance		Finite Road	Fre	snel	Barrier Atte	en Ber	m Atten
Autos:	66.51	3.93	-3.4	49	0.00		-1.04	0.0	00	0.000
Medium Trucks:	77.72	-9.78	-3.4	49	0.00		-1.15	0.0	00	0.000
Heavy Trucks:	82.99	-12.79	-3.4	49	0.00		-1.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier atte	nu	ation)					

nmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos	: 67.0	65.2	60.6	58.5	66.5	66.8			
Medium Trucks	: 64.4	62.7	58.1	56.0	64.0	64.3			
Heavy Trucks	: 66.7	65.0	60.4	58.3	66.3	66.6			
Vehicle Noise	70.9	69.2	64.6	62.5	70.5	70.8			

Centerline Distance to Noise Contour (in feet)									
	70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:	124	391	1,237	3,910					
CNEL:	132	418	1,323	4,183					

Scenario: Existing + Project + Cumulative
Road Name: Proposed SA-330 (Montecito Way

Project Name: Montecito Ranch
Job Number: 4568

Road Segment: Montecito Rd Montecito Ranch	Analyst: A. Stalker
Hoad Name: Proposed SA-330 (Montecilo Way	JOD Number: 4500

SITE SPECIFIC II	NPUT DATA	NOISE MODEL INPUTS						
Highway Data		Site Conditions (Hard	= 10, So	ft = 15)				
Average Daily Traffic (Adt): Peak Hour Percentage:	3,131 vehicles 10%	Medium Trucks (2	Autos: 2 Axles):	10 10				
Peak Hour Volume: Vehicle Speed:	313 vehicles 40 mph	Heavy Trucks (3+ Axles): 10 Vehicle Mix						
Near/Far Lane Distance:	12 feet	VehicleType	Day	Evening	Night	Daily		
Site Data		Autos:	80.0%	7.0%	13.0%	95.00%		
Barrier Height: Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier:	0.0 feet 0.0 100.0 feet	Medium Trucks: Heavy Trucks: Noise Source Elevation	80.0%	7.0%	13.0% 13.0%	4.00% 1.00%		
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	110.0 feet 10.0 feet 5.0 feet 0.0 feet	Medium Trucks:	0.000 2.297 8.006	Grade Ad	justment.	0.0		
Road Elevation: Road Grade:	0.0 feet 0.0%	Lane Equivalent Dista Autos: 10	nce (in 1 9.950	feet)				
Left View:	-90.0 degrees		9.869					

FHWA Noise Model Calculations

Right View:

90.0 degrees

I IIIIA Noise meat	or ourouration	•					
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-6.59	-3.49	0.00	-1.04	0.000	0.000
Medium Trucks:	77.72	-20.35	-3.49	0.00	-1.15	0.000	0.000
Heavy Trucks:	82.99	-26.37	-3.49	0.00	-1.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	56.4	54.7	50.1	48.0	56.0	56.3			
Medium Trucks:	53.9	52.1	47.6	45.5	53.4	53.7			
Heavy Trucks:	53.1	51.4	46.8	44.7	52.7	53.0			
Vehicle Noise:	59.5	57.7	53.2	51.1	59.1	59.3			

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	9	28	88	280
CNEL:	9	30	95	299

Heavy Trucks: 109.877

Scenario: Existing + Project + Cumulative Road Name: Proposed SA-330 (Montecito Way Road Segment: Montecito Rd.- Main St. (SR-67) Project Name: Montecito Ranch Job Number: 4568

Analyst: A. Stalker

SITE	SPECIFIC INP	UT DATA		NOISE MODEL INPUTS					
Highway Data				Site Cor	nditions (H	ard = 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	,472 vehicles	3			Autos:	10		
Peak Hour	Percentage:	10%		Me	edium Truc	ks (2 Axles):	10		
Peak H	lour Volume:	247 vehicles	3	Не	eavy Trucks	s (3+ Axles):	10		
Ve	hicle Speed:	40 mph		Vehicle	Miy				
Near/Far La	ne Distance:	12 feet			nicleType	Day	Evening	Night	Daily
Site Data					Au	tos: 80.0%	7.0%	13.0%	95.00%
Bai	rrier Height:	0.0 feet		M	ledium Trud	cks: 80.0%	7.0%	13.0%	4.00%
Barrier Type (0-W	_	0.0			Heavy Truc	cks: 80.0%	7.0%	13.0%	1.00%
Centerline Di	st. to Barrier:	100.0 feet		Noise Source Elevations (in feet)					
Centerline Dist.	to Observer:	110.0 feet			Autos:	0.000			
Barrier Distance	to Observer:	10.0 feet		Mediu	m Trucks:	2.297			
Observer Height (Observer Height (Above Pad): 5.0 feet				vy Trucks:	8.006	Grade Adj	iustment.	0.0
Pá	ad Elevation:	0.0 feet		7704	vy Trucks.	0.000			0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent D	istance (in	feet)		
ı	Road Grade:	0.0%			Autos:	109.950			
	Left View:	-90.0 degree	es	Mediu	m Trucks:	109.869			
	Right View:	90.0 degree	es	Hea	vy Trucks:	109.877			
FHWA Noise Mode	el Calculations								
VehicleType	REMEL 7	raffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Ber	m Atten
Autos:	66.51	-7.62	-3.4	49	0.00	-1.04	0.0	00	0.000
Medium Trucks:	77.72	-21.37	-3.4	49	0.00	-1.15	0.0	00	0.000
Heavy Trucks:	82.99	-27.40	-3.4	49	0.00	-1.43	0.0	00	0.000
Unmitigated Noise	e Levels (withou	it Topo and i	barrier atte	nuation)					
VehicleType	Leq Peak Hour	Leq Day	Leq I	Evening	Leq Ni	ght	Ldn	CI	VEL

Unmitigated Nois	se Levels (without	Topo and barri	er attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos	55.4	53.6	49.1	47.0	55.0	55.3
Medium Trucks	: 52.9	51.1	46.5	44.4	52.4	52.7
Heavy Trucks	: 52.1	50.3	45.8	43.7	51.7	52.0
Vehicle Noise	: 58.5	56.7	52.1	50.1	58.0	58.3

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	7	22	70	221
CNEL:	7	24	75	236

Scenario: Existing + Project + Cumulative Road Name: Proposed SA-330 (Montecito Ran Road Segment: Project West Access to Montecito

Project Name: Montecito Ranch

SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data			S	ite Conditions (Hard = 10, Sc	oft = 15)			
Vehic Near/Far Lane Site Data	ercentage: er Volume: ele Speed: Distance: er Height: , 1-Berm):	2,531 vehicles 10% 253 vehicles 40 mph 12 feet 0.0 feet 0.0 100.0 feet	, V	Heavy Truck Yehicle Mix Vehicle Type Al Medium Tru Heavy Tru	ıcks: 80.0%	10 10 Evening 5 7.0% 6 7.0% 7.0%	Night 13.0% 13.0% 13.0%	Daily 95.00% 4.00%	
Centerline Dist. to Barrier Distance to Observer Height (Ab Pad Road Roa	Observer: Observer:	110.0 feet 10.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree	L L	Ioise Source Ele Autos Medium Trucks Heavy Trucks ane Equivalent Autos Medium Trucks Heavy Trucks	0.000 2.297 8.006 Distance (in 109.950 109.869	Grade Adju	ustment	0.0	
FHWA Noise Model (
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte		m Atten	
Autos:	66.51	-7.52	-3.49		-1.04	0.0	00	0.000	
Medium Trucks:	77.72	-21.27	-3.49	0.00	-1.15	0.0	00	0.000	
Heavy Trucks:	82.99	-27.29	-3.49	0.00	-1.43	0.0	00	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	55.5	53.7	49.2	47.1	55.1	55.4				
Medium Trucks:	53.0	51.2	46.6	44.6	52.5	52.8				
Heavy Trucks:	52.2	50.5	45.9	43.8	51.8	52.1				
Vehicle Noise:	58.6	56.8	52.2	50.2	58.1	58.4				

Centerline Distance to Noise Contour (in feet)											
	70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:	7	23	72	226							
CNEL:	8	24	77	242							

Scenario: Existing + Project + Cumulative Road Name: Proposed SA-330 (Montecito Ran Road Segment: Between Main Project Access Poi

51.3

57.7

Centerline Distance to Noise Contour (in feet)

49.6

55.9

Ldn:

CNEL:

45.0

51.4

70 dBA

6

6

42.9

49.3

65 dBA

18

20

50.9

57.2

60 dBA

58

62

51.2

57.5

55 dBA

184

197

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE	SPECIFIC IN	NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt):	2,060 vehicles	S			Autos:	10				
Peak Hour	Percentage:	10%		Me	edium Truc	cks (2 Axles):	10				
Peak H	lour Volume:	206 vehicles	s	He	eavy Truck	ks (3+ Axles):	10				
Ve	Vehicle Speed: 40 mph				Mix						
Near/Far La	ne Distance:	istance: 12 feet			nicleType	Day	Evening	Night	Daily		
Site Data						utos: 80.0%		13.0%			
	rrier Height:	0.0 feet	PROPERTY AND A STREET OF THE STREET, S	M	ledium Tru			13.0%			
Barrier Type (0-W	•	0.0			Heavy Tru	icks: 80.0%	7.0%	13.0%	1.00%		
Centerline Di	•	100.0 feet		Noise C		vetiene (in f	4\				
Centerline Dist.	to Observer.	110.0 feet		Noise Source Elevations (in feet)							
Barrier Distance		Autos:									
Barrier Distance to Observer: 10.0 feet Observer Height (Above Pad): 5.0 feet					m Trucks:		0 1 - 4 - 1'-		0.0		
•	ad Elevation:	0.0 feet		Hea	vy Trucks:	8.006	Grade Adju	stment	: 0.0		
	ad Elevation:	0.0 feet		Lane Eq	uivalent L	Distance (in	feet)				
	Road Grade:	0.0%			Autos:	<u>`</u>					
	Left View:	-90.0 degree	es	Mediu	m Trucks:	109.869					
	Right View:	90.0 degree			vy Trucks:						
FHWA Noise Mode			Distance	Tiis.	Dand	F	D 444 -		144		
VehicleType		Traffic Flow	Distance		Road	Fresnel	Barrier Atte		m Atten		
Autos:	66.51	-8.41		.49	0.00	-1.04	0.00		0.000		
Medium Trucks:	77.72	-22.17		.49	0.00	-1.15	0.00		0.000		
Heavy Trucks:	82.99	-28.19	-3	.49	0.00	-1.43	0.00	00	0.000		
Unmitigated Noise	e Levels (witho	ut Topo and	barrier atte	enuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq	Evening	Leq N	light	Ldn		NEL		
Autos:	54.6	3 ;	52.8	48.3		46.2	54.2		54.5		
Medium Trucks:	52.1	1 ⁻ .	50.3	45.7		43.7	51.6		51.9		

Heavy Trucks:

Vehicle Noise:

Scenario: Existing + Project + Cumulative

Road Name: Ash St.

Road Segment: East Project Access - Pine St. (S

Project Name: Montecito Ranch

SITE	SPECIFIC IN	PUT DATA		NOISE MODEL INPUTS							
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt):	2,795 vehicle	s S	Autos: 10							
	r Percentage:	10%		Medium Trucks (2 Axles): 10							
Peak H	Hour Volume:	280 vehicle	·s	Heavy Trucks (3+ Axles): 10							
Ve	ehicle Speed:	40 mph		Vehicle Mix							
Near/Far La	ane Distance:	12 feet			icleType	Day	Evening	Night	Daily		
Site Data				Veri	Auto:			13.0%	95.00%		
		004		M	edium Truck:			13.0%	4.00%		
	rrier Height:	0.0 feet			leavy Truck			13.0%	1.00%		
Barrier Type (0-V	•	0.0		•	Todvy Truom	J. 00.070	7.070	10.070	1.0070		
	ist. to Barrier:	100.0 feet 110.0 feet		Noise So	ource Eleva	tions (in f	eet)				
Centerline Dist. Barrier Distance		10.0 feet			Autos:	0.000					
Observer Height				Mediu	m Trucks:	2.297					
J	(Above Fau). ad Elevation:	5.0 feet 0.0 feet		Heav	y Trucks:	8.006	Grade Adju	ustment.	0.0		
	ad Elevation: ad Elevation:	0.0 feet		I ane Fo	uivalent Dis	tance (in	foot)				
710		Larro Lq		109.950	1001)	1100					
	es	Mediu		109.869							
	es			109.877							
FUMA Naisa Mad	lat Calautatiana										
FHWA Noise Mod VehicleType		Traffic Flow	Distance	Finite	Dood E	roonal	Darrian Atta	n Dor	m Atton		
Autos:	66.51	-7.08		49		resnel -1.04	Barrier Atte		m Atten		
Medium Trucks:	77.72	-7.06	-3. -3.		0.00 0.00		0.0		0.000		
Heavy Trucks:		-26.86		49 49	0.00	-1.15 -1.43	0.00		0.000		
		·			0.00	-1.43	0.00		0.000		
Unmitigated Noise											
VehicleType	Leq Peak Hour			Evening	Leq Nigh		Ldn	CI	VEL		
Autos:	55.9		54.2	49.6		47.5	55.5		55.8		
Medium Trucks:	53.4		51.6	47.1		45.0	52.9		53.2		
Heavy Trucks:	52.6) 	50.9	46.3		44.2	52.2		52.5		
Vehicle Noise:	59.0)	57.2	52.7		50.6	58.6		58.9		
Centerline Distanc	ce to Noise Cor	ntour (in feet									
) dBA	65 dBA	6	60 dBA		dBA		
			Ldn:	8	25		79		50		
		CI	VEL:	8	27		84	2	67		

Scenario: Existing + Project + Cumulative

Road Name: Ash St.

Road Segment: Pine St.(SR-78) - Elm St.

Project Name: Montecito Ranch

SITE S	PECIFIC IN	IPUT DATA		NOISE MODEL INPUTS							
Highway Data			9	Site Conditions (Hard = 10, Soft = 15)							
Average Daily T	raffic (Adt):	676 vehicles	S	Autos: 10							
Peak Hour F	Percentage:	10%		Medium Tru	icks (2 Axles)	: 10					
Peak Ho	ur Volume:	68 vehicles	s	Heavy Truc	ks (3+ Axles)	: 10					
Veh	icle Speed:	40 mph	1	/ehicle Mix				110 110 000			
Near/Far Land	e Distance:	12 feet		VehicleType	Day	Evening	Night	Daily			
Site Data					utos: 80.0%			95.00%			
Barr	ier Height:	0.0 feet		Medium Tr	ucks: 80.0%	6 7.0%	13.0%	4.00%			
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 80.0% 7.0% 13.0% 1.00							
Centerline Dist. to Barrier: 100.0 feet				loise Source El	evations (in t	feet)					
Barrier Distance to Observer Height (A	Centerline Dist. to Observer: 110.0 feet Barrier Distance to Observer: 10.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet			Autos Medium Trucks Heavy Trucks	s: 2.297	Grade Adj	ustment	: 0.0			
	l Elevation:	0.0 feet	L	Lane Equivalent Distance (in feet)							
Re	oad Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree		Autos Medium Trucks Heavy Trucks	s: 109.869						
FHWA Noise Model	Calculations	s									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	en Ber	m Atten			
Autos:	66.51	-13.25	-3.49	0.00	-1.04	0.0	00	0.000			
Medium Trucks:	77.72	-27.01	-3.49	0.00	-1.15	0.0	00	0.000			
Heavy Trucks:	82.99	-33.03	-3.49	-3.49 0.00 <i>-1.43</i> 0.000			00	0.000			

Unmitigated Nois	e Levels (without	Topo and barri	er attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	49.8	48.0	43.5	41.4	49.3	49.6
Medium Trucks:	47.2	45.5	40.9	38.8	46.8	47.1
Heavy Trucks:	46.5	44.7	40.2	38.1	46.0	46.3
Vehicle Noise:	52.8	51.1	46.5	44.4	52.4	52.7

Centerline Distance to Noise Contour (in feet)											
	70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:	2	6	19	60							
CNEL:	2	6	20	65							

Scenario: Existing + Project + Cumulative

54.7

61.1

Centerline Distance to Noise Contour (in feet)

53.0

59.3

Ldn:

CNEL:

Road Name: Montecito Rd.

Road Segment: Montecito Way - Davis St.

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE	SPECIFIC IN	PUT DATA		NOISE MODEL INPUTS							
Highway Data				Site Condition	ns (Hard = 10), Soft = 15)					
Average Daily	, ,	4,518 vehicles	•			itos: 10		,			
Peak Hou	r Percentage:	10%			Trucks (2 Ax	,					
Peak I	Hour Volume:	452 vehicles	5	Heavy T	rucks (3+ Ax	<i>les):</i> 10					
	ehicle Speed:	40 mph		Vehicle Mix							
Near/Far La	ane Distance:	12 feet		VehicleTy	pe Da	ay Evening	Night	Daily			
Site Data				Autos: 80.0% 7.0% 13.0%							
Ba	arrier Height:	0.0 feet		Medium	Trucks: 80	0.0% 7.0%	13.0%	4.00%			
Barrier Type (0-V	•	0.0		Heavy	Trucks: 80	0.0% 7.0%	13.0%	3 1.00%			
Centerline D	ist. to Barrier:	100.0 feet		Noise Source	Elevations ((in feet)					
Centerline Dist.	to Observer:	110.0 feet			tos: 0.00						
Barrier Distance	to Observer:	10.0 feet		Medium Tru							
Observer Height	(Above Pad):	5.0 feet		Heavy Trucks: 8.006 Grade				t· 0 0			
P	Pad Elevation:	Elevation: 0.0 feet			ono. 0.00		.,				
Ro	ad Elevation:	0.0 feet		Lane Equivale	ent Distance	(in feet)					
	Road Grade:	0.0%		Autos: 109.950							
	Left View:	-90.0 degree	s	Medium Tru	cks: 109.86	9					
	Right View:	90.0 degree	s	Heavy Tru	cks: 109.87	7					
FHWA Noise Mod	lel Calculations	3									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier At	ten Be	rm Atten			
Autos:	66.51	-5.00	-3.4	9 0.0	0 -1	<i>.04</i> 0.	000	0.000			
Medium Trucks:	77.72	-18.76	-3.4	9 0.0	0 -1	.15 0.	000	0.000			
Heavy Trucks:	82.99	-24.78	-3.4	9 0.0	0 -1	<i>.43</i> 0.	000	0.000			
Unmitigated Nois	e Levels (witho	out Topo and b	parrier atter	nuation)	,						
VehicleType	Leq Peak Hou	r Leq Day	Leq E	vening Le	eq Night	Ldn	C	NEL			
Autos:	58.	0 5	6.3	51.7	49.6	57.	6	57.9			
Medium Trucks:	55.	5 5	3.7	49.2	47.1	55.	0	55.3			

48.4

54.8

70 dBA

13

14

46.3

52.7

65 dBA

40

43

54.3

60.6

60 dBA

128

137

54.6

60.9

55 dBA

404

432

Heavy Trucks:

Vehicle Noise:

Scenario: Existing + Project + Cumulative

Road Name: Montecito Rd.

Road Segment: Davis St. - Main St. (SR-67)

Project Name: Montecito Ranch

Job Number: 4568 Analyst: A. Stalker

SITE S	SPECIFIC IN		NOISE MODEL INPUTS							
Highway Data				Site Co	nditions (l	Hard = 10, S	oft = 15)			
Average Daily	Traffic (Adt):	7,018 vehicles	3			Autos:	10			
Peak Hour I	Percentage:	10%		M	edium Trud	cks (2 Axles).	10			
Peak He	our Volume:	702 vehicles	3	H	eavy Truck	ks (3+ Axles).	10			
Vel	hicle Speed:	40 mph	-	Vehicle	Miy					
Near/Far Lar	ne Distance:	12 feet			hicleType	Day	Evening	Night	Daily	
Site Data	g- 1770					utos: 80.0%		13.0%		
Rar	rier Height:	0.0 feet		Λ	ledium Tru	icks: 80.0%	7.0%	13.0%	4.00%	
Barrier Type (0-Wa	_	0.0			Heavy Tru	<i>icks:</i> 80.0%	7.0%	13.0%	1.00%	
Centerline Dis	•	100.0 feet		Noise S	ource Fle	vations (in f	oot)			
Centerline Dist. t	to Observer:	110.0 feet	-	110136 0	Autos:	<u>-</u>				
Barrier Distance t	to Observer:	10.0 feet		Madi	Autos. :m Trucks					
Observer Height (Above Pad): 5.0 feet							Grade Ad	liuetmant		
	d Elevation:	0.0 feet		пеа	vy Trucks:	0.000	Grade Au	justinent	. 0.0	
Roa	d Elevation:	0.0 feet		Lane Ed	quivalent l	Distance (in	feet)			
F	Road Grade:	0.0%			Autos:	109.950				
	Left View:	-90.0 degree	es	Mediu	ım Trucks:	109.869				
	Right View:	90.0 degree	es	Hea	vy Trucks:	109.877				
FHWA Noise Mode	el Calculations)								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten	
Autos:	66.51	-3.09	-3.4	.9	0.00	-1.04	0.0	000	0.000	
Medium Trucks:	77.72	-16.84	-3.4	.9	0.00	-1.15	0.0	000	0.000	
Heavy Trucks:	82.99	-22.86	-3.4	9	0.00	-1.43	0.0	000	0.000	
Unmitigated Noise	Levels (witho	out Topo and I	barrier attei	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq E	vening	Leq N	light	Ldn	CI	NEL	
_								_		

Centerline Distance to	Noise Contour (in feet)	70.454	05 104	00 /04	55 (0.4
Vehicle Noise:	63.0	61.2	56.7	54.6	62.6	62.9
Heavy Trucks:	56.6	54.9	50.3	48.2	56.2	56.5
Medium Trucks:	57.4	55.6	51.1	49.0	56.9	57.2

53.6

58.2

/				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	63	198	627
CNEL:	21	67	212	671

51.5

59.8

59.5

Autos:

59.9

APPENDIX D

BUILDING FACADE ANALYSIS PREDICTION MODEL INPUTS AND CALCULATIONS FOR EXISTING PLUS PROJECT SCENARIO (ROADWAY DESIGN OPTION 1)

OFFOPT1

```
Montecito Ranch First Floor Off Site Existing Plus Project Option 1
 T-Peak Hour Traffic Conditions, 1
297, 40, 13, 40, 3, 40
T-Peak Hour Traffic Conditions, 2
   266 , 40 , 11 , 40 , 3 , 40
 L-Montecito Way,
 N, 4309., 4740, 1436,
 N, 4205., 4547, 1432,
N, 4188., 4350, 1430,
N, 4175., 3006, 1415,
N, 4157., 2237, 1412,
 N, 4158., 1370, 1405,
 N, 4142., 385, 1400,
N,4142.,385,1400,

L-Ash Street, 2

N,11089.,6896,1619,

N,11931.,6894,1575,

N,12627.,6895,1558,

N,13085.,6894,1556,

N,13954.,6891,1552,

N,14437.,6891,1551,

B-Road Edge 1, 1 , 1 , 0 ,0
 4329.,4740,1436,1436,
 4225., 4547, 1432, 1432,
 4208.,4350,1430,1430,
4208., 4350, 1430, 1430,
4195., 3006, 1415, 1415,
4177., 2237, 1412, 1412,
4178., 1370, 1405, 1405,
4162., 385, 1400, 1400,
B-Road Edge 2, 2, 1, 0, 0
 4185., 4547, 1432, 1432,
 4168., 4350, 1430, 1430,
4168., 4350, 1430, 1430,
4155., 3006, 1415, 1415,
4137., 2237, 1412, 1412,
4138., 1370, 1405, 1405,
4122., 385, 1400, 1400,
B-Road Edge 3, 3, 1,
11089., 6916, 1619, 1619,
 11931.,6914,1575,1575,
 12627.,6915,1558,1558,
 13085.,6914,1556,1556,
13085.,6914,1556,1556,

13954.,6911,1552,1552,

14437.,6911,1551,1551,

B-Road Edge 4, 4, 2,

11089.,6876,1619,1619,

11931.,6874,1575,1575,

12627.,6875,1558,1558,

13085.,6874,1556,1556,
13954.,6871,1552,1552,
14437.,6871,1551,1551,
R, 1, 67, 500
4230, 4298, 1435.,
R, 2, 67, 500
4227, 4059, 1430.,
R, 3, 67, 500
4331, 2932, 1418.,
R, 4, 67,500
4233,2847,1418.,
R, 5 , 67 ,500
4212,2716,1418.,
R, 6, 67,500
4219,2645,1418.,
R, 7, 67,500
```

OFFOPT1

4226, 2558, 1416.,
R, 8, 67, 500
4114, 2138, 1418.,
R, 9, 67, 500
4061, 1427, 1409.,
R, 10, 67, 500
4202, 669, 1409.,
R, 11, 67, 500
11304, 7064, 1627.,
R, 12, 67, 500
11489, 6841, 1593.,
R, 13, 67, 500
11647, 6970, 1585.,
R, 14, 67, 500
11716, 6952, 1583.,
R, 14, 67, 500
11716, 6952, 1583.,
R, 15, 67, 500
11852, 7004, 1566.,
R, 16, 67, 500
11952, 6777, 1582.,
R, 17, 67, 500
11994, 6963, 1562.,
R, 18, 67, 500
1298, 6983, 1550.,
R, 19, 67, 500
12859, 6739, 1565.,
R, 20, 67, 500
12965, 7058, 1567.,
C, C

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TITLE:
Montecito Ranch First Floor Off Site Existing Plus Project Option 1
BARRIER DATA

BAR ELE	0	1	BARR 2	IER I 3	HE I GH ⁻ 4	6	7.		AR D	LENGTH	TYPE
1 2 3 4 5 6	- - - - -	0.* 0.* 0.* 0.* 0.*						B1 B1 B1 B1	P1 P2 P3 P4 P5 P6	219.3 197.7 1344.1 769.2 867.0 985.1	BERM BERM BERM BERM BERM BERM
7 8 9 10 11 12	- - - -	0.* 0.* 0.* 0.* 0.*						B2 B2 B2 B2	P1 P2 P3 P4 P5 P6	219.3 197.7 1344.1 769.2 867.0 985.1	BERM BERM BERM BERM BERM BERM
13 14 15 16 17	- - - -	0.* 0.* 0.* 0.* 0.*						B3 B3 B3		843.2 696.2 458.0 869.0 483.0	BERM BERM BERM BERM BERM
18 19 20 21 22	- - - - -	0.* 0.* 0.* 0.*				 		B4 B4		843.2 696.2 458.0 869.0 483.0	MASONRY MASONRY MASONRY MASONRY MASONRY

7

REC REC ID DNL PEOPLE LEQ(CAL) 62.8 58.8 R-1 67. 500. 1234567 R-2 R-3 500. 67. 52.5 500. 67. R-4 500. 57.7 67. 60.1 57.8 57.2 R-5 67. 500. 67 . 67 . 500. R-6 500. R-7 8 R-8 500. 63.0 67. 9 R-9 67. 500. 54.9 10 500. 59.7 R-10 67. 11 12 R-11 67. 500. 50.7 57.2 500. R-12 67. 52.2 53.5 13 500. R-13 67. 14 15 67. R-14 500. R-15 R-16 52.8 56.2 500. 67. 500. 16 67. 17 R-17 52.0 67. 500. 53.5 54.2 R-18 500. 18 67. 67. 19 R-19 500. 20 R-20 67. 500. 51.4

2

3

5

6

0

Page 1

MOFFOPT1

```
Montecito Ranch First Floor Off Site Existing Plus Project Option 1 MIT
      T-Peak Hour Traffic Conditions, 1
    297 , 40 , 13 , 40 , 3 , 40
T-Peak Hour Traffic Conditions, 2
266 , 40 , 11 , 40 , 3 , 40
L-Montecito Way, 1
N,4309 , 4740 , 1436 ,
      N, 4205., 4547, 1432,
      N, 4188., 4350, 1430,
      N, 4175., 3006, 1415,
     N, 4157., 2237, 1412,
   N,4158.,1370,1405,
N,4158.,1370,1405,
N,4142.,385,1400,
L-Ash Street, 2
N,11089.,6896,1619,
N,11931.,6894,1575,
    N, 12627., 6895, 1558,
N, 13085., 6894, 1556,
    N, 13954., 6891, 1552,
    N,14437.,6891,1551,
B-Road Edge 1, 1 , 1
   4329., 4740, 1436, 1436, 4225., 4547, 1432, 1432, 4208., 4350, 1430, 1430, 4195., 3006, 1415, 1415, 4177., 2237, 1412, 1412, 4178., 1370, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 1405, 
    4162.,385,1400,1400,
    B-Road Edge 2, 2,
    4289.,4740,1436,1436,
   4269., 4740, 1436, 1436,
4185., 4547, 1432, 1432,
4168., 4350, 1430, 1430,
4155., 3006, 1415, 1415,
4137., 2237, 1412, 1412,
4138., 1370, 1405, 1405,
    4122.,385,1400,1400,
    B-Road Edge 3, 3 , 1 ,
11089.,6916,1619,1619,
                                                                                                                                0,0
    11931.,6914,1575,1575,
 1931.,6914,1373,1373,
12627.,6915,1558,1558,
13085.,6914,1556,1556,
13954.,6911,1552,1552,
14437.,6911,1551,1551,
B-Road Edge 4, 4, 2,
11089.,6876,1619,1619,
   11931.,6874,1575,1575,
   12627.,6875,1558,1558,
1202/.,08/5,1558,1558,

13085.,6874,1556,1556,

13954.,6871,1552,1552,

14437.,6871,1551,1551,

B-Barrier 1, 5 , 2 , 0 ,0

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4220.,4256,1430,1434,

B-Barrier 8, 6 , 2 , 0 ,0

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4122.,2090,1413,1417
  4122.,2090,1413,1417,
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 R, 2, 67,500
 4227,4059,1430.,
R, 3 , 67 ,500
4331,2932,1418.,
R, 4 , 67 ,500
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MOFFOPT1

4233,2847,1418.,
R, 5, 67,500
4212,2716,1418.,
R, 6, 67,500
4219,2645,1418.,
R, 7, 67,500
4226,2558,1416.,
R, 8, 67,500
4114,2138,1418.,
R, 9, 67,500
4061,1427,1409.,
R, 10, 67,500
4202,669,1409.,
R, 11, 67,500
11304,7064,1627.,
R, 12, 67,500
11489,6841,1593.,
R, 13, 67,500
11489,6841,1593.,
R, 14, 67,500
11716,6952,1583.,
R, 14, 67,500
11716,6952,1583.,
R, 15, 67,500
11852,7004,1566.,
R, 16, 67,500
11952,6777,1582.,
R, 17, 67,500
11994,6963,1562.,
R, 18, 67,500
12498,6983,1550.,
R, 19, 67,500
12859,6739,1565.,
R, 20, 67,500
12865,7058,1567.,
C, C

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BAR ELE	0	1	BARRIER 2 3	4	5	6	7	BAR ID	LENGTH	TYPE
1 2 3 4 5 6	- - - -	0.* 0.* 0.* 0.* 0.*						B1 P1 B1 P2 B1 P2 B1 P4 B1 P6	2 197.7 3 1344.1 4 769.2 5 867.0	
7 8 9 10 11	- - - -	0.* 0.* 0.* 0.* 0.*						B2 P2 B2 P3 B2 P3 B2 P4 B2 P5 B2 P6	2 197.7 3 1344.1 4 769.2 5 867.0	BERM BERM BERM BERM BERM BERM
13 14 15 16 17	- - - -	0.* 0.* 0.* 0.*						B3 P2 B3 P3 B3 P4 B3 P4	3 458.0	BERM BERM BERM BERM BERM
18 19 20 21 22	- - - -	0.* 0.* 0.* 0.*						B4 P2 B4 P3	843.2 696.2 458.0 4 869.0 5 483.0	
23	-	4.*						B5 P	1 77.0	MASONRY
24	-	4.*						B6 P	99.0	MASONRY
1 R 2 R 3 R 4 R 5 R 6 R 7 R 8 R 9 R 10 R 11 R 12 R 13 R 14 R 15 R 16 R	0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12 -13 -14 -15 -16 -17 -18	DNL	500 . 500 . 500 .	LE 59 58 52 57 60	Q(CAL)0 .8 .5 .7 .1 .8 .2 .7 .9 .7 .7 .2 .2 .5 .8 .2		7			

Page 1

SOUND32

19	R-19	67.	500.	54.2
20	R-20	67.	500.	51.4

OFF20PT1 Montecito Ranch Second Floor Off Site Existing Plus Project Option 1 T-Peak Hour Traffic Conditions, 1 297, 40, 13, 40, 3, 40 T-Peak Hour Traffic Conditions, 2 266, 40, 11, 40, 3, 40 L-Montecito Way, 1 N, 4309., 4740, 1436, N, 4205., 4547, 1432, N, 4188, , 4350, 1430, N,4108.,4350,1430, N,4175.,3006,1415, N,4157.,2237,1412, N,4158.,1370,1405, N,4142.,385,1400, L-Ash Street, 2 N,11089.,6896,1619, N, 11931., 6894, 1575, N, 12627., 6895, 1558, N, 13085., 6894, 1556, N, 13085., 6894, 1556, N, 13954., 6891, 1552, N, 14437., 6891, 1551, B-Road Edge 1, 1, 1 4329., 4740, 1436, 1436, 4225., 4547, 1432, 1432, 4208., 4350, 1430, 1430, , 0 ,0 4195.,3006,1415,1415, 4177., 2237, 1412, 1412, 4178., 1370, 1405, 1405, 4162., 385, 1400, 1400, B-Road Edge 2, 2, 1 4289., 4740, 1436, 1436, 4185., 4547, 1432, 1432, 4168., 4350, 1430, , 0 ,0 4155., 3006, 1415, 1415, 4137., 2237, 1412, 1412, 4138., 1370, 1405, 1405, 4122., 385, 1400, 1400, B-Road Edge 3, 3, 1 B-Road Edge 3, 3, 1, 11089.,6916,1619,1619, 11931.,6914,1575,1575, 12627.,6915,1558,1558, 13085.,6914,1552,1552, 14437.,6911,1551,1551, B-Road Edge 4, 4, 2, 11089.,6876,1619,1619, 11931. 11931.,6874,1575,1575, 12627.,6875,1558,1558, 13085.,6874,1556,1556, 13954.,6871,1552,1552, 14437.,6871,1551,1551, R, 1 , 67 ,500 12859,6739,1575., R, 2 , 67 ,500 12965,7058,1577.,

C, C

SOUND32

SOUND32 - RELEASE 07/30/91

TITLE: Montecito Ranch Second Floor Off Site Existing Plus Project Option 1

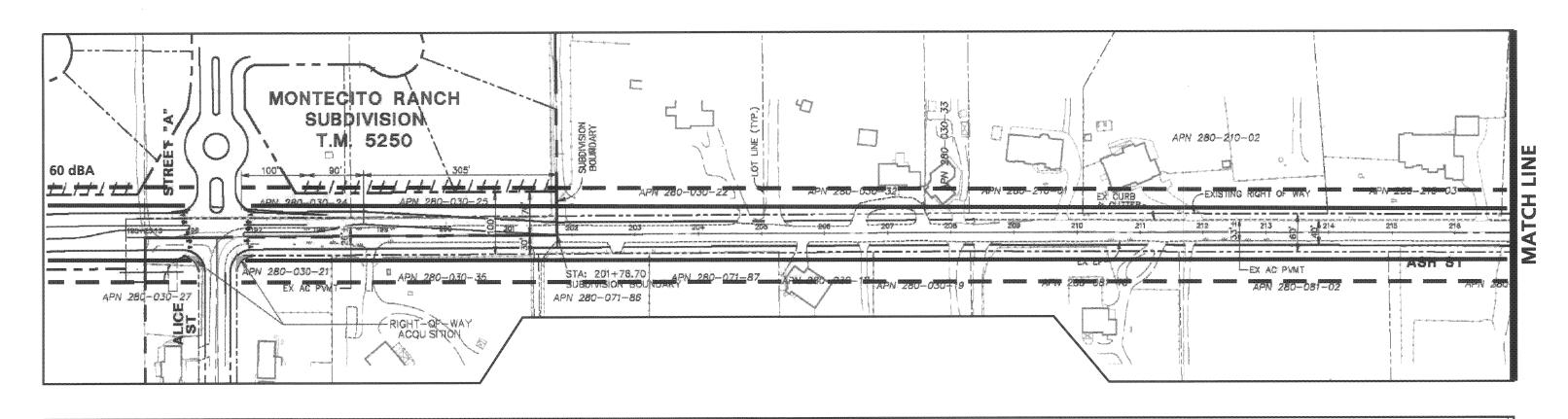
BARRIER DATA

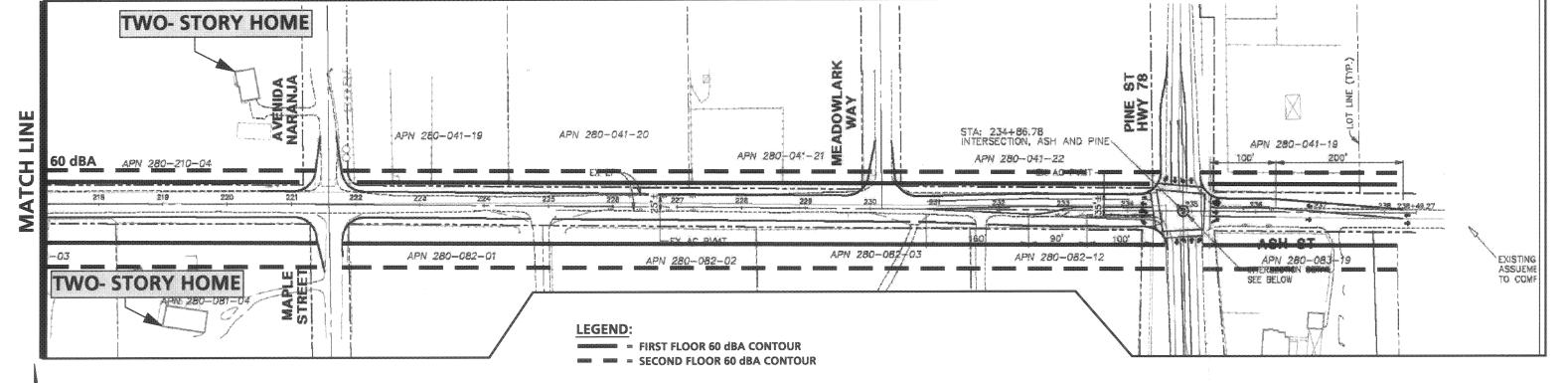
BAR ELE	0	1	BAR 2	RIER I 3	HE I GH 4	TS 5	6	7	BAR ID	LENGTH	TYPE
1 2 3 4 5	 - - - -	0.* 0.* 0.* 0.* 0.* 0.*							B1 P1 B1 P2 B1 P3 B1 P4 B1 P5 B1 P6	219.3 197.7 1344.1 769.2 867.0 985.1	BERM BERM BERM BERM BERM BERM BERM
7 8 9 10 11	- - - -	0.* 0.* 0.* 0.* 0.*							B2 P1 B2 P2 B2 P3 B2 P4 B2 P5 B2 P6	219.3 197.7 1344.1 769.2 867.0 985.1	BERM BERM BERM BERM BERM BERM
13 14 15 16 17	- - - -	0.* 0.* 0.* 0.* 0.*							B3 P1 B3 P2 B3 P3 B3 P4 B3 P5	843.2 696.2 458.0 869.0 483.0	BERM BERM BERM BERM BERM
18 19 20 21 22	- - - -	0.* 0.* 0.* 0.*							B4 P1 B4 P2 B4 P3 B4 P4 B4 P5	843.2 696.2 458.0 869.0 483.0	MASONRY MASONRY MASONRY MASONRY
	0	1	2	3	4	5	6	7		· ·	

REC REC ID DNL PEOPLE LEQ(CAL)

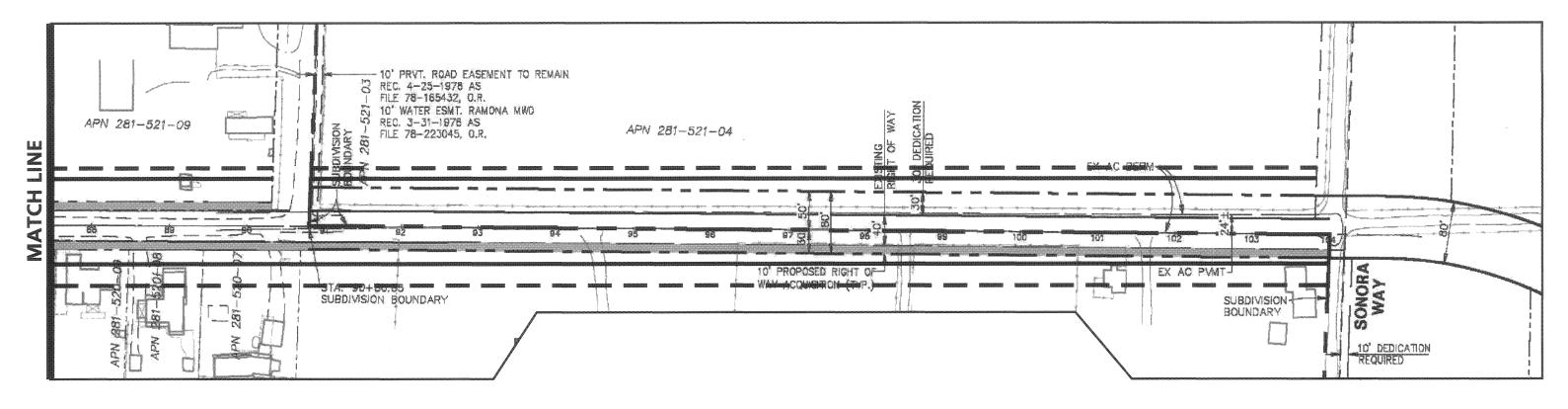
1 R-1 67. 500. 55.2
2 R-2 67. 500. 53.2

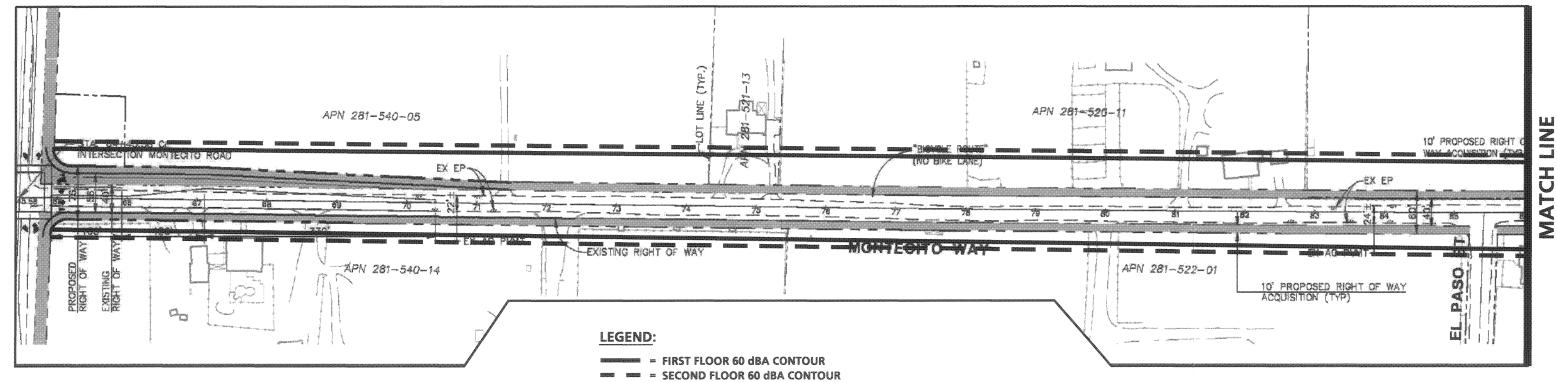
OFF - SITE EXISTING PLUS PROJECT NOISE CONTOURS ASH STREET OPTION 1





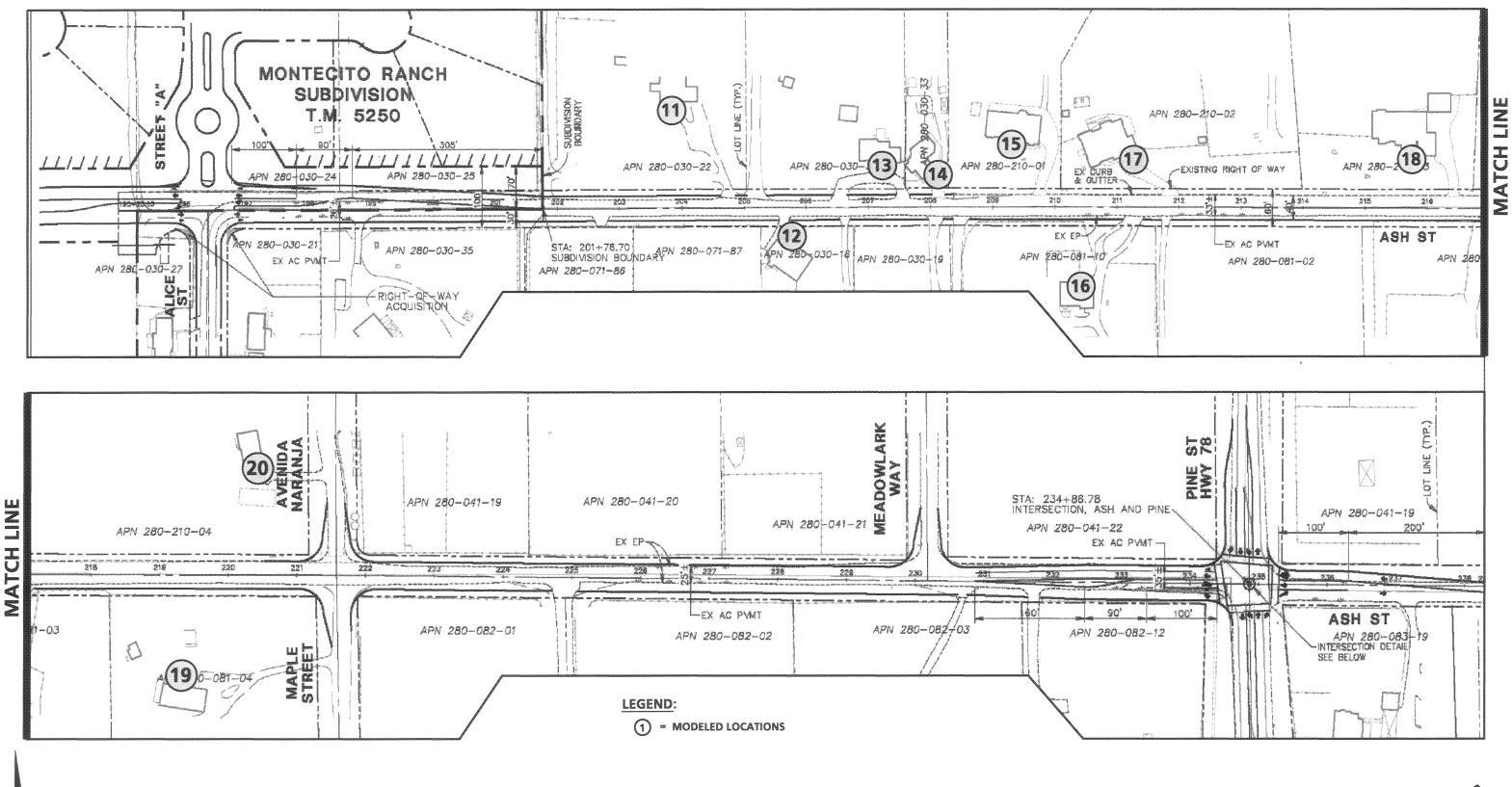
OFF - SITE EXISTING PLUS PROJECT NOISE CONTOURS MONTECITO WAY OPTION 1



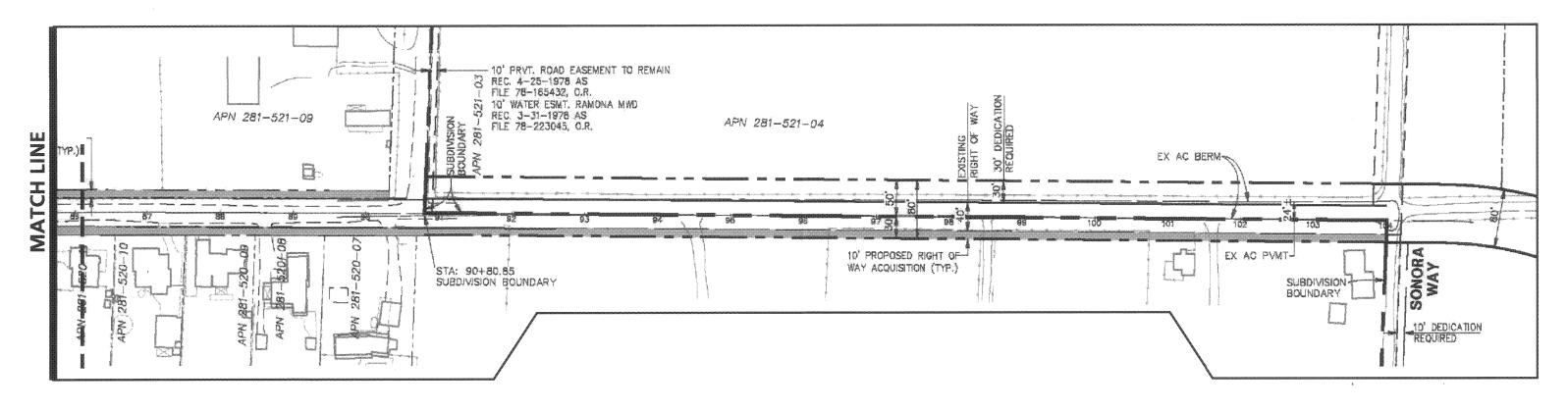


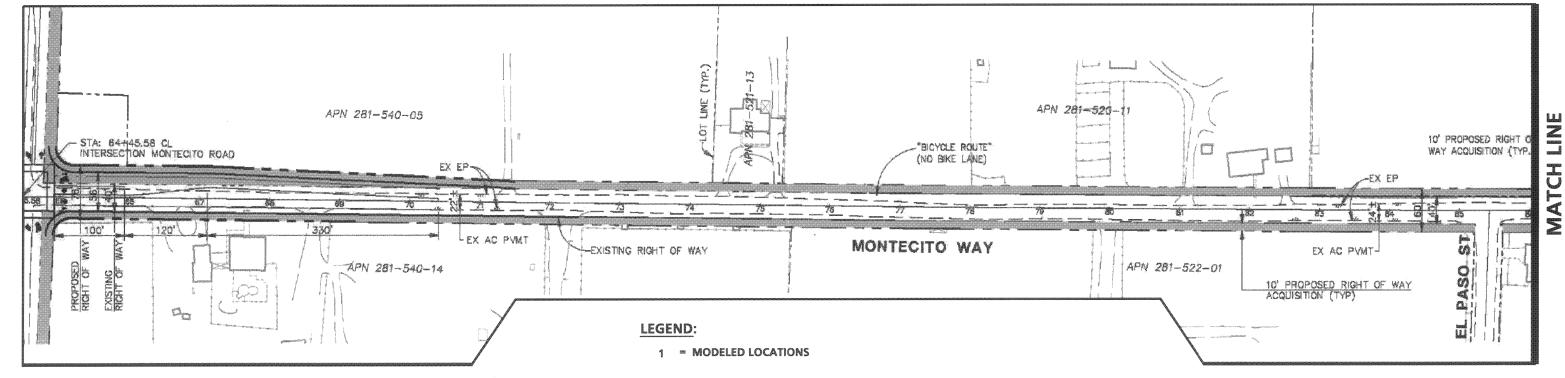


OFF - SITE MODELED OBSERVER LOCATIONS ASH STREET



OFF - SITE MODELED OBSERVER LOCATIONS ASH STREET







6.2 <u>Traffic Noise Prediction Model Inputs (Roadway Option 1)</u>

Tables 6-1 and 6-2 present the FHWA Traffic Noise Prediction Model roadway parameters for roadway design Option 1 used in this analysis. Hard site conditions were used to develop noise contours and analyze noise impacts to the project site. This will provide a worse-case analysis.

The average daily traffic volumes used for the off-site analysis in this study are presented in Table 6-2. The traffic volumes were obtained from the Traffic Impact Analysis prepared by Urban Systems Associates (2007).

Table 6-3 presents the hourly traffic flow distributions (vehicle mix) used for this analysis. The future traffic noise model utilizes previously accepted vehicle mixes of 94% Autos, 4% Medium Trucks and 2% Heavy Trucks for Highway 78 and State Route 67 and 95% Autos, 4% Medium Trucks and 1% Heavy Trucks for all other roadways. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks and heavy trucks for input into the FHWA Model.

6.3 Traffic Noise Contours (Roadway Option 1)

To assess the off-site noise level impacts associated with development of the proposed Montecito Ranch Residential Development under roadway design Option 1, noise contours were developed for the following traffic scenarios:

<u>Existing</u>: This scenario refers to the existing present-day noise conditions, without construction of the proposed project.

<u>Existing with project</u>: This scenario refers to the existing present-day noise conditions, with construction of the proposed project. This corresponds to the completion of the project's buildout.

TABLE 6-1

ROADWAY PARAMETERS

		ROADWAY	VEHICLE	SITE
ROADWAY	SEGMENT	CLASSIFICATION ¹	SPEED (MPH) ²	CONDITIONS
SR-78	Ash St Haverford Rd.	Rural Light Collector	40	Hard
SR-78	Ash St Olive St.	Rural Light Collector	40	Hard
SR-78	Olive St Main St. (SR-67)	Rural Light Collector	40	Hard
10th St.	Main St. (SR-67) - H St.	Rural Light Collector	40	Hard
Main St. (SR-78)	7th St 3rd St.	Major	55	Hard
Main St. (SR-67)	10th St Montecito Rd.	Major	55	Hard
Main St. (SR-67)	Montecito Rd Hunter St.	Major	22	Hard
Main St. (SR-67)	Hunter St Proposed SA-330	Rural Light Collector	40	Hard
Main St. (SR-67)	Proposed SA-330 - Highland Valley Rd.	Rural Light Collector	40	Hard
Main St. (SR-67)	Highland Valley Rd Archie Moore Rd.	Rural Light Collector	40	Hard
Main St. (SR-67)	Archie Moore Rd Poway Rd	Rural Light Collector	40	Hard
Proposed SA-330 (Montecito Way)	Montecito Rd Montecito Ranch Rd	Rural Light Collector	40	Hard
Proposed SA-330 (Montecito Way)	Montecito Rd Main St. (SR-67)	Rural Light Collector	40	Hard
Proposed SA-330 (Montecito Ranch Rd.)	Project West Access to Montecito Way	Rural Light Collector	40	Hard
Proposed SA-330 (Montecito Ranch Rd.)	Between Main Project Access Points	Rural Light Collector	40	Hard
Ash St.	East Project Access - Pine St. (SR-78)	Rural Light Collector	40	Hard
Ash St.	Pine St.(SR-78) - Elm St.	Rural Light Collector	40	Hard
Montecito Rd.	Montecito Way - Davis St.	Rural Light Collector	40	Hard
Montecito Rd.	Davis St Main St. (SR-67)	Rural Light Collector	40	Hard

¹ According to the Traffic Impact Analysis prepared by Urban Systems Associates (2007).

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² According to Attachment C of the County of San Diego Guidelines for Determining Significance

TABLE 6-2

AVERAGE DAILY TRAFFIC¹

			AVERAGE DAILY TRAFFIC	RAFFIC
ROADWAY	SEGMENT	EXISTING	EXISTING PLUS PROJECT	EXISTING PLUS PROJECT PLUS CUMULATIVE
SR-78	Ash St Haverford Rd.	9,700	9,994	14,485
SR-78	Ash St Olive St.	10,200	12,024	19,100
SR-78	Olive St Main St. (SR-67)	10,700	12,054	19,130
10th St.	Main St. (SR-67) - H St.	7,000	7,479	18,535
Main St. (SR-78)	7th St 3rd St.	23,300	23,594	30,680
Main St. (SR-67)	10th St Montecito Rd.	29,500	30,206	37,292
Main St. (SR-67)	Montecito Rd Hunter St.	27,300	27,947	34,562
Main St. (SR-67)	Hunter St Proposed SA-330	27,000	27,647	35,514
Main St. (SR-67)	Proposed SA-330 - Highland Valley Rd.	27,000	28,471	36,338
Main St. (SR-67)	Highland Valley Rd Archie Moore Rd.	24,000	25,059	34,456
Main St. (SR-67)	Archie Moore Rd Poway Rd	25,000	25,883	35,686
Proposed SA-330 (Montecito Way)	Montecito Rd Montecito Ranch Rd	009	3,132	3,131
Proposed SA-330 (Montecito Way)	Montecito Rd Main St. (SR-67)	0	2,472	2,472
Proposed SA-330 (Montecito Ranch Rd.)	Project West Access to Montecito Way	0	3,131	2,531
Proposed SA-330 (Montecito Ranch Rd.)	Between Main Project Access Points	0	2,060	2,060
Ash St.	East Project Access - Pine St. (SR-78)	200	2,795	2,795
Ash St.	Pine St.(SR-78) - Elm St.	200	929	929
Montecito Rd.	Montecito Way - Davis St.	3,500	3,559	4,518
Montecito Rd.	Davis St Main St. (SR-67)	6,000	6;029	7,018

1 According to the Traffic Impact Analysis prepared by Urban Systems Associates (2007).

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TABLE 6-3
SEGMENT ANALYSIS HOURLY TRAFFIC FLOW DISTRIBUTION

MOTOR-VEHICLE TYPE	DAYTIME (7 AM TO 7 PM)	EVENING (7 PM TO 10 PM)	NIGHT (10 PM TO 7 AM)	TOTAL % TRAFFIC FLOW
	HIGHWAY 78 A	ND STATE ROUTE	67	
Automobiles	80.0%	7.0%	13.0%	94.00%
Medium Trucks	80.0%	7.0%	13.0%	4.00%
Heavy Trucks	80.0%	7.0%	13.0%	2.00%
	ALL OTH	ER ROADWAYS		
Automobiles	80.0%	7.0%	13.0%	95.00%
Medium Trucks	80.0%	7.0%	13.0%	4.00%
Heavy Trucks	80.0%	7.0%	13.0%	1.00%

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<u>Near Term With / Without Project</u>: This scenario refers to the background noise conditions for near term conditions with and without the proposed project. This corresponds to the completion of the project's buildout and includes additional future cumulative developments as identified in the Montecito Ranch Traffic Impact Analysis.

Noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway. CNEL noise contours are determined for the 55, 60, 65 and 70 dBA noise levels.

The distance from the centerline of the roadway to the CNEL contours for roadways in the proposed project's vicinity roadway design Option 1 are presented in Tables 6-4 through 6-6. The noise contours do not take into account the effect of any existing noise barriers or topography that may affect ambient noise levels. The noise contour calculations are included in Appendix "C".

6.4 Project Traffic Noise Level Contributions (Roadway Option 1)

Table 6-7 presents the comparison of the Existing Year with and without project noise levels shown in Tables 6-4 and 6-5. The roadway noise impacts will increase from 0.0 dBA CNEL to 7.5 dBA CNEL with the development of the proposed project. Table 6-8 presents a comparison of the Cumulative Year with and without project noise levels shown in Tables 6-6 and 6-7. The roadway noise impacts will increase from 0.7 dBA CNEL to 7.5 dBA CNEL with the development of the proposed project and the addition of the proposed cumulative projects.

6.5 Off-Site Transportation Related Project Noise Impact Analysis (Roadway Option 1)

Section 4 discussed the significance criteria. Roadway noise impacts would be considered significant if the project raises the noise levels above the County of San Diego 60 dBA CNEL standard, except if the existing noise level without project is 58 dBA or greater, a 3 dBA increase is allowed up to the maximum permitted by the Federal Highway Administration Standards.

TABLE 6-4

EXISTING CONDITIONS NOISE CONTOURS

			DIST	DISTANCE TO CONTOUR (FEET)	ONTOUR (F	EET)
ROAD	SEGMENT	CNEL AT 100 FEET (dBA)	70 dBA CNEL	65 dBA CNEL	60 dBA	55 dBA CNEL
SR-78	Ash St Haverford Rd.	65.1	36	114	360	1,137
SR-78	Ash St Olive St.	65.4	38	120	378	1,196
SR-78	Olive St Main St. (SR-67)	9:59	40	125	397	1,254
10th St.	Main St. (SR-67) - H St.	62.8	21	29	212	699
Main St. (SR-78)	7th St 3rd St.	72.1	178	561	1,775	5,614
Main St. (SR-67)	10th St Montecito Rd.	73.1	225	111	2,248	7,108
Main St. (SR-67)	Montecito Rd Hunter St.	72.8	208	829	2,080	6,578
Main St. (SR-67)	Hunter St Proposed SA-330	9.69	100	317	1,001	3,165
Main St. (SR-67)	Proposed SA-330 - Highland Valley Rd.	9.69	100	317	1,001	3,165
Main St. (SR-67)	Highland Valley Rd Archie Moore Rd.	69.1	89	281	890	2,813
Main St. (SR-67)	Archie Moore Rd Poway Rd	69.3	93	293	927	2,931
Proposed SA-330 (Montecito Way)	Montecito Rd Montecito Ranch Rd	52.2	2	9	18	57
Proposed SA-330 (Montecito Way)	Montecito Rd Main St. (SR-67)			DNE		
Proposed SA-330 (Montecito Ranch Rd.)	Project West Access to Montecito Way			DNE		
Proposed SA-330 (Montecito Ranch Rd.)	Between Main Project Access Points			DNE		
Ash St.	East Project Access - Pine St. (SR-78)	51.4	2	2	15	48
Ash St.	Pine St.(SR-78) - Elm St.	51.4	2	2	15	48
Montecito Rd.	Montecito Way - Davis St.	59.8	11	33	106	335
Montecito Rd.	Davis St Main St. (SR-67)	62.2	18	22	181	574

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TABLE 6-5

EXISTING PLUS PROJECT CONDITIONS NOISE CONTOURS

			DIST	ANCE TO C	DISTANCE TO CONTOUR (FEET)	EET)
ROAD	SEGMENT	CNEL AT 100 FEET (dBA)	70 dBA CNEL	65 dBA CNFI	60 dBA	55 dBA
SR-78	Ash St Haverford Rd.	65.3	37	117	370	1,172
SR-78	Ash St Olive St.	66.1	45	141	446	1,409
SR-78	Olive St Main St. (SR-67)	66.1	45	141	447	1,413
10th St.	Main St. (SR-67) - H St.	63.1	23	7.1	226	715
Main St. (SR-78)	7th St 3rd St.	72.1	180	699	1,798	5,685
Main St. (SR-67)	10th St Montecito Rd.	73.2	230	728	2,302	7,279
Main St. (SR-67)	Montecito Rd Hunter St.	72.9	213	673	2,130	6,734
Main St. (SR-67)	Hunter St Proposed SA-330	2.69	102	324	1,025	3,241
Main St. (SR-67)	Proposed SA-330 - Highland Valley Rd.	8.69	106	334	1,055	3,337
Main St. (SR-67)	Highland Valley Rd Archie Moore Rd.	69.3	93	294	926	2,938
Main St. (SR-67)	Archie Moore Rd Poway Rd	69.4	96	303	626	3,034
Proposed SA-330 (Montecito Way)	Montecito Rd Montecito Ranch Rd	59.3	6	30	92	299
Proposed SA-330 (Montecito Way)	Montecito Rd Main St. (SR-67)	58.3	7	24	75	236
Proposed SA-330 (Montecito Ranch Rd.)	Project West Access to Montecito Way	59.3	6	30	92	299
Proposed SA-330 (Montecito Ranch Rd.)	Between Main Project Access Points	57.5	9	20	62	197
Ash St.	East Project Access - Pine St. (SR-78)	58.9	8	27	84	267
Ash St.	Pine St.(SR-78) - Elm St.	52.7	2	9	20	65
Montecito Rd.	Montecito Way - Davis St.	59.9	11	34	108	340
Montecito Rd.	Davis St Main St. (SR-67)	62.2	18	58	183	579

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TABLE 6-6

EXISTING PLUS PROJECT PLUS CUMULATIVE CONDITIONS NOISE CONTOURS

			DIST/	DISTANCE TO CONTOUR (FEET)	ONTOUR (F	EET)
ROAD	SEGMENT	CNEL AT 100 FEET (dBA)	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
SR-78	Ash St Haverford Rd.	6.99	54	170	537	1,698
SR-78	Ash St Olive St.	68.1	71	224	708	2,239
SR-78	Olive St Main St. (SR-67)	68.1	71	224	602	2,242
10th St.	Main St. (SR-67) - H St.	67.1	56	177	260	1,772
Main St. (SR-78)	7th St 3rd St.	73.3	234	739	2,338	7,393
Main St. (SR-67)	10th St Montecito Rd.	74.1	284	668	2,842	8,986
Main St. (SR-67)	Montecito Rd Hunter St.	73.8	263	833	2,634	8,328
Main St. (SR-67)	Hunter St Proposed SA-330	8.07	132	416	1,316	4,163
Main St. (SR-67)	Proposed SA-330 - Highland Valley Rd.	6.07	135	426	1,347	4,260
Main St. (SR-67)	Highland Valley Rd Archie Moore Rd.	9.02	128	404	1,277	4,039
Main St. (SR-67)	Archie Moore Rd Poway Rd	70.8	132	418	1,323	4,183
Proposed SA-330 (Montecito Way)	Montecito Rd Montecito Ranch Rd	59.3	6	30	92	299
Proposed SA-330 (Montecito Way)	Montecito Rd Main St. (SR-67)	58.3	7	24	75	236
Proposed SA-330 (Montecito Ranch Rd.)	Project West Access to Montecito Way	58.4	8	24	7.7	242
Proposed SA-330 (Montecito Ranch Rd.)	Between Main Project Access Points	57.5	9	20	62	197
Ash St.	East Project Access - Pine St. (SR-78)	58.9	8	27	84	267
Ash St.	Pine St. (SR-78) - Elm St.	52.7	2	9	20	65
Montecito Rd.	Montecito Way - Davis St.	6.09	14	43	137	432
Montecito Rd.	Davis St Main St. (SR-67)	62.9	21	29	212	671

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TABLE 6-7

EXISTING YEAR PROJECT CONTRIBUTIONS

		CNI	CNEL AT 100 FEET (dBA)	JBA)
ROAD	SEGMENT	NO PROJECT	WITH PROJECT	PROJECT CONTRIBUTION
SR-78	Ash St Haverford Rd.	65.1	65.3	0.1
SR-78	Ash St Olive St.	65.4	66.1	0.7
SR-78	Olive St Main St. (SR-67)	65.6	66.1	0.5
10th St.	Main St. (SR-67) - H St.	62.8	63.1	0.3
Main St. (SR-78)	7th St 3rd St.	72.1	72.1	0.1
Main St. (SR-67)	10th St Montecito Rd.	73.1	73.2	0.1
Main St. (SR-67)	Montecito Rd Hunter St.	72.8	72.9	0.1
Main St. (SR-67)	Hunter St Proposed SA-330	9.69	2.69	0.1
Main St. (SR-67)	Proposed SA-330 - Highland Valley Rd.	9.69	69.8	0.2
Main St. (SR-67)	Highland Valley Rd Archie Moore Rd.	. 69.1	69.3	0.2
Main St. (SR-67)	Archie Moore Rd Poway Rd	69.3	69.4	0.2
Proposed SA-330 (Montecito Way)	Montecito Rd Montecito Ranch Rd	52.2	59.3	7.2
Proposed SA-330 (Montecito Way)	Montecito Rd Main St. (SR-67)	DNE	58.3	1
Proposed SA-330 (Montecito Ranch Rd.)	Project West Access to Montecito Way	DNE	59.3	1
Proposed SA-330 (Montecito Ranch Rd.)	Between Main Project Access Points	DNE	57.5	ı
Ash St.	East Project Access - Pine St. (SR-78)	51.4	58.9	7.5
Ash St.	Pine St.(SR-78) - Elm St.	51.4	52.7	1.3
Montecito Rd.	Montecito Way - Davis St.	59.8	59.9	0.1
Montecito Rd.	Davis St Main St. (SR-67)	62.2	62.2	0.0

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TABLE 6-8

CUMULATIVE YEAR PROJECT CONTRIBUTIONS

		CN	CNEL AT 100 FEET (dBA)	BA)
ROAD	SEGMENT	EXISTING NO PROJECT	EXISTING PLUS PROJECT PLUS CUMULATIVE	CUMULATIVE NOISE LEVEL INCREASE
SR-78	Ash St Haverford Rd.	65.1	6.99	1.7
SR-78	Ash St Olive St.	65.4	68.1	2.7
SR-78	Olive St Main St. (SR-67)	65.6	68.1	2.5
10th St.	Main St. (SR-67) - H St.	62.8	67.1	4.2
Main St. (SR-78)	7th St 3rd St.	72.1	73.3	1.2
Main St. (SR-67)	10th St Montecito Rd.	73.1	74.1	1.0
Main St. (SR-67)	Montecito Rd Hunter St.	72.8	73.8	1.0
Main St. (SR-67)	Hunter St Proposed SA-330	9.69	70.8	1.2
Main St. (SR-67)	Proposed SA-330 - Highland Valley Rd.	9.69	6.07	1.3
Main St. (SR-67)	Highland Valley Rd Archie Moore Rd.	69.1	9:02	1.6
Main St. (SR-67)	Archie Moore Rd Poway Rd	69.3	70.8	1.5
Proposed SA-330 (Montecito Way)	Montecito Rd Montecito Ranch Rd	52.2	59.3	7.2
Proposed SA-330 (Montecito Way)	Montecito Rd Main St. (SR-67)	DNE	58.3	_
Proposed SA-330 (Montecito Ranch Rd.)	Project West Access to Montecito Way	DNE	58.4	-
Proposed SA-330 (Montecito Ranch Rd.)	Between Main Project Access Points	DNE	57.5	-
Ash St.	East Project Access - Pine St. (SR-78)	51.4	58.9	7.5
Ash St.	Pine St.(SR-78) - Elm St.	51.4	52.7	1.3
Montecito Rd.	Montecito Way - Davis St.	59.8	60.9	1.1
Montecito Rd.	Davis St Main St. (SR-67)	62.2	62.9	0.7

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The project creates an increase of more than 3.0 dBA CNEL along segments of Ash Street and Montecito Way as can be seen in Table 6-7 but does not increase the existing noise levels above the 60 dBA CNEL County threshold to noise sensitive areas (i.e. rear yards). There is a cumulative impact of more than 3.0 dBA CNEL on 10^{th} Street; however the project will only increase the existing noise level by 0.3 dBA CNEL, which is considered to be non-significant. Therefore, the proposed project's contributions to off-site roadway noise increases will not cause any significant impacts to any existing or future sensitive noise receptors under roadway design Option 1. It should be noted: This analysis was based on a worse-case flat grading plan. Intervening topography could decrease the noise levels at the existing homes. As stated above, no rear yard areas or sensitive uses areas are located adjacent to these roadway segments and therefore no exterior impacts to existing noise sensitive land use areas are anticipated.

For existing plus project conditions, the 60 dBA contour lies at 95 feet from the centerline on Montecito Way and 84 feet from the centerline on Ash Street. This worse-case model suggests that building facades of several existing homes along these roads would experience noise levels above the County of San Diego 60 dBA CNEL standard and therefore a more detailed analysis was conducted to determine the actual contour locations.

Using the FHWA traffic noise prediction model, calculations of the expected project noise impacts to existing homes on Montecito Way and Ash Street were completed. An analysis has been performed to determine the acoustical shielding which may be used to reduce the expected roadway noise impact for the interior of these homes. Key input data for these barrier performance equations include the relative source-barrier-receiver horizontal separations, the relative source-barrier-receiver vertical separations, the typical noise source spectra and the barrier transmission loss. The building façade noise levels were analyzed for the existing plus project conditions. Under the County of San Diego noise standards, exterior façade levels above 60 dBA CNEL may require additional interior mitigation.

6.6 Noise Contour Boundaries (Roadway Option 1)

Noise contours are lines that drawn around a noise source indicating a constant or equal level of noise exposure. Noise contour boundaries are generally used as a planning tool to assess the need for additional analysis.

The noise contour boundaries were developed for unmitigated existing plus project conditions on Montecito Way and Ash Street. No barriers were included as part of the noise contour analysis. The Sound32 traffic noise prediction model was used to calculate a reference noise level for observers perpendicular to Montecito Way and Ash Street. Exhibit 6-A provides the location of the first and second floor 60 dBA CNEL noise contour boundaries for Ash Street and Exhibit 6-B provides the first and second floor 60 dBA CNEL noise contour boundaries for Montecito Way. It was identified that first floor façade levels for two homes along Montecito Way are above 60 dBA CNEL and several second story façade levels on both streets may be above the 60 dBA CNEL standard. Based on this finding, potential mitigation may be required.

6.7 Existing Plus Project Exterior Noise Analysis (Roadway Option 1)

The analysis was modeled assuming existing plus project traffic volumes along Montecito Way and Ash Street. A site-survey of the existing homes on Montecito Way and Ash Street was conducted on February 12, 2007. It was found that all the homes along Montecito Way were single story and only two homes within close proximity of Ash Street were two-story. It should be noted that both the two-story homes along Ash Street are outside the identified 60 dBA CNEL contour as previously shown in Exhibit 6-A. Therefore the only building facades which will potentially have unmitigated noise levels above 60 dBA CNEL are two single-story homes located along Montecito Way.

Two mitigation options will reduce building façade levels to below 60 dBA CNEL. One option is to incorporate 4-foot high noise barriers along Montecito Way, in front of both affected homes, which would sufficiently mitigate building façade levels. Option two is to utilize rubberized asphalt on the roadway in front of the two affected homes, extending 300 feet beyond the homes in both directions. Measurements were taken by Urban Crossroads along State Route 52 (SR 52) where concrete pavement meets rubberized asphalt pavement in order to obtain the difference in noise levels between the two types of pavement. The results showed a range of 2 to 4 dBA Leq difference between the concrete section of the SR 52 and the asphalt section of the SR 52. An average reduction of -3 dBA can be taken wherever rubberized asphalt is used. This is sufficient to reduce building façade levels to below 60 dBA CNEL at both affected homes. The incorporation of either mitigation option will adequately reduce the building façade levels at both affected homes. No additional mitigation would be required to comply with the County of San Diego exterior noise standards along Montecito Way and Ash Street. Exhibit 1-A shows the two mitigation options required to bring building façade noise levels to below 60 dBA CNEL.

Modeled observer locations for Ash Street are presented in Exhibit 6-C and for Montecito Way in Exhibit 6-D. The results of the mitigated building façade levels are shown in Table 6-9. The Sound32 input and output decks for existing plus project conditions are provided in Appendix "D".

6.8 Noise Control Barrier Construction Materials (Roadway Option 1)

The designed noise screening may only be accomplished if the barriers weight is at least 3.5 pounds per square foot of face area and have no decorative cutouts or line-of-site openings between shielded areas and the roadways. The recommended noise control barrier may be constructed using one of the following alternative materials:

TABLE 6-9

EXISTING PLUS PROJECT BUILDING FACADE EXTERIOR NOISE LEVELS (dBA CNEL)

RECEPTOR	RECEPTOR LOCATION	UNMITIGATED FIRST FLOOR BUILDING FACADE NOISE LEVEL (dBA CNEL)		MITIGATED FIRST FLOOR BUILDING FACADE NOISE LEVEL UTILIZING RUBBERIZED ASPHALT (dBA CNEL)	UNMITIGATED SECOND FLOOR BUILDING FACADE NOISE LEVEL (dBA CNEL) ¹	BARRIER HEIGHT (IN FEET) ²
1	MONTECITO WAY	62.8	59.0	59.8	DNE	4.0
2	MONTECITO WAY	58.8	58.8	58.8	DNE	0.0
3	MONTECITO WAY	52.5	52.5	52.5	DNE	0.0
4	MONTECITO WAY	57.7	57.7	57.7	DNE	0.0
5	MONTECITO WAY	60.1	60.1	60.1	DNE	0.0
6	MONTECITO WAY	57.8	57.8	57.8	DNE	0.0
7	MONTECITO WAY	57.2	57.2	57.2	DNE	0.0
8	MONTECITO WAY	63.0	58.7	60.0	DNE	4.0
9	MONTECITO WAY	54.9	54.9	54.9	DNE	0.0
10	MONTECITO WAY	59.7	59.7	59.7	DNE	0.0
11	ASH STREET	50.7	50.7	50.7	DNE	0.0
12	ASH STREET	57.2	57.2	57.2	. DNE	0.0
13	ASH STREET	52.2	52.2	52.2	DNE	0.0
14	ASH STREET	53.5	53.5	53.5	DNE	0.0
15	ASH STREET	52.8	52.8	52.8	DNE	0.0
16	ASH STREET	56.2	56.2	56.2	DNE	0.0
17	ASH STREET	52.0	52.0	52.0	DNE	0.0
18	ASH STREET	53.5	53.5	53.5	DNE	0.0
19	ASH STREET	54.2	54.2	54.2	55.2	0.0
20	ASH STREET	51.4	51.4	51.4	53.2	0.0

¹ Homes at receptors 1-18 are one-story

 $^{^{2}\,}$ Barrier height in feet above pad or roadway elevation, whichever is greater to achieve maximum insertion loss.

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- 1. Masonry block;
- 2. Stucco veneer over wood framing (or foam core), or 1 inch thick tongue and groove wood of sufficient weight per square foot;
- 3. Glass (1/4 inch thick), or other transparent material with sufficient weight per square foot;
- 4. Earthen berm;
- 5. Any combination of these construction materials.

Barriers must utilize ¼ thick glass or an equivalent transparent material to meet the required noise mitigations measures. The recommended barrier must present a solid face from top to bottom. Unnecessary openings or decorative cutouts should not be made. All gaps (except for weep holes) should be filled grout or caulking.

6.9 Traffic Noise Prediction Model Inputs (Roadway Option 2)

Tables 6-10 and 6-11 present the FHWA Traffic Noise Prediction Model roadway parameters for roadway design Option 2 used in this analysis. Hard site conditions were used to develop noise contours and analyze noise impacts to the project site. This will provide a worse-case analysis.

The average daily traffic volumes used for the on-site analysis in this study are presented in Table 6-11. The traffic volumes were obtained from the Traffic Impact Analysis prepared by Urban Systems Associates (2007).

Table 6-12 presents the hourly traffic flow distributions (vehicle mix) used for this analysis. The future traffic noise model utilizes previously accepted vehicle mixes of 94% Autos, 4% Medium Trucks and 2% Heavy Trucks for Highway 78 and State Route 67 and 95% Autos, 4% Medium Trucks and 1% Heavy Trucks for all other roadways. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks and heavy trucks for input into the FHWA Model.

SA 330 EXTENSION:

DRAINAGE INFORMATION

MATCH LINE SEE PREVIOUS SHEET "DEVELOPED ONSITE DRAINAGE BASINS MODE 001 OS-100C 0S-100B 0S-100A OFFSITE CULVERT Q100=390 CFS* OFFSITE CULVERT-Q100=400 CFS* OFFSITE CULVERT Q100=200 CFS* OS-100D FEMA-100 QAVE=1,100 CFS** FLOOD PLAIN/ FLOODWAY PER FEMA FIRM PANEL 06073C1117F AND 06073C1119F OS-100F -Q100=15,600 CFS**

LEGEND

DRAINAGE BASIN BOUNDARY

0S-100

DRAINAGE BASIN I.D.

DIRECTION OF FLOW

NOTES

- Q100 VALUE FROM "FLOOD AND DRAINAGE MANAGEMENT REPORT FOR THE RAMONA AREA (SPECIAL DRAINAGE AREA #8)", LEEDSHILL-HERKENHOFF, INC., JUNE 1992
- ** Q100 APPROXIMATED FROM LOCATION SHOWN ON FIGURE 2 OF "HYDROLOGY REPORT FOR SANTA MARIA CREEK SFC 3156, DATED NOVEMBER 1997", PROVIDED BY SAN DIEGO COUNTY FLOOD CONTROL DISTRICT,



SUITE 320 SAN DIEGO, CA 92123-1352

FAX: 858.69 www.scengr.com

858.694.5661

MONTECITO RANCH DEVELOPED OFFSITE ROADWAY DRAINAGE BASINS **COUNTY OF SAN DIEGO TRACT 5250**

FLOOD AND DRAINAGE MANAGEMENT REPORT

FOR

THE BAMONA AREA

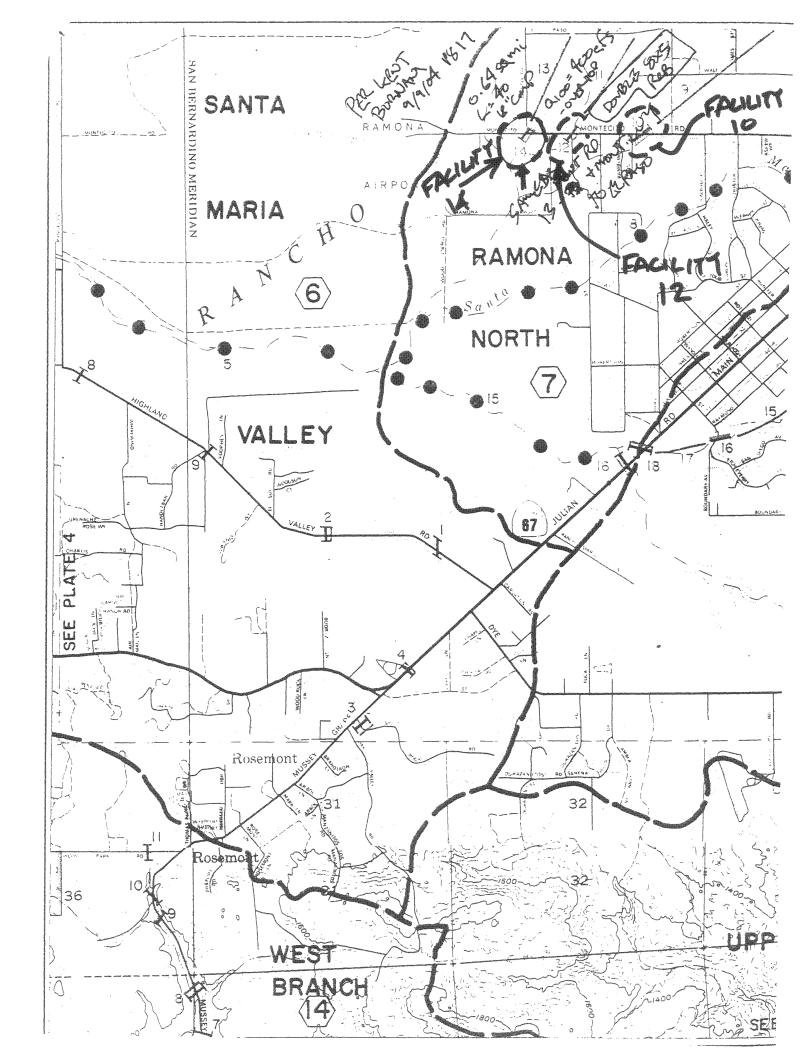
(SPECIAL DRAINAGE AREA#3)

COUNTY OF SAN DIEGO FLOOD CONTROL DISTRICT

JUNE 1992



LEEDSHILL HERKENHOFF, INC. 10225 Barnes Canyon Road - Sulte A210 San Dieso, California 82121



LEEDSHILL-HERKENHOFF, INC.

The recommended improvements shown in this table are for the purpose of providing a basic design for cost estimating. Environmental review and final design will be necessary before any improvements can be constructed.

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				Drainage			Capacity CFS	FS			Installation	
Basin	Facility	Plate		Area	Length	Existing	Required 1992	1992	Associated	Recommended	Cost	
No.	No.	No.	Location	(SQ MI)	(FT)	Conditions	Existing 50 YR	100 YR	Problems	Improvements	(Dollars)	Priority
7	9	'n	Between Facility	30.00	2,000	Santa Maria Ck.,	остольный приментации примент	15,600	Flooding Of Future	None	\$3,800	3
ALL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CO			5 & Montecito Rd.			Flood Plain Mapped			Development			engingaioptobach*
7	7	5	Montecito Rd. Cross-	30.00	130	3-Span Bridge	10,000	15,600	Overtops Bridge	Add 4 - 12' x 10'	\$94,500	寸
Managara da ang ang ang ang ang ang ang ang ang an			ing of Santa Maria Ck.			130. Long				RCB		engeller filmlingsstuffen seit Generales für der
7	œ	17	Some Marin	31 50 00	000			000		and disconnections of the second seco	00%	
	0	•	Downstream from Montecito Rd.	06.16	200	Natural C.K. Bed., Flood Plain Mapped		000,51	Flooding Of Existing And Future Development	None	00/:27	***
7	6	2	From Montecito Ave.,	0.50	7.900	Natural Drainage		390	Flooding Of Existing	Earth Ch.	\$392,200	Ç1
			5,000 Fr. West of 7.						And Future Develop- ment	$b = 10^{\circ}$ $d = 4^{\circ}$		illario Emparetta (escolo
												or and a second
7	⊆	Ś	On Montecito Rd.,	0.50	9	42" x 29" CMPA	52	360	Overtops Road	Add Double	\$31,200	+
	(Downstream of Facility 9.		1		•		74/5377T	8' x 5' RCB		***************************************
	ormose ormose	'n	From Montecito Rd.	0.30	2,500	Natural Dramage	à	200	Flooding Of Future	Earth Ch.	\$146.800	m
		Ž							Perculpinen.	d = 3°		and the second second
1	2	1/	On Montecia Rd	, 0. 0	OF	40" v 33" CMPA	78	000	Overtone Road	Actd Double	001 863	-1
	3)	Downstream of	000	}		2		Overticipa room	6' x 4' RCB	-	0
\int_{-}			Fire lity .				•		となって			***************************************

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			PRINTED TO THE PROPERTY OF THE		**************************************	ручения в при при при при при при при при при при	Виления прификтирования проделжана физикована принципри продости при при при при при при при при при пр		Chaire d Name and the Commission of the Commissi		ACCOUNTY OF THE COUNTY AND THE PROPERTY OF THE	Concession and Concession of the Concession of t

COUNTY OF SAN DIEGO community services agency department of sanitation & flood control

COMPREHENSIVE PLAN FLOOD CONTROL and DRAINAGE

ZONE 1
SAN DIEGO COUNTY
FLOOD CONTROL DISTRICT

JULY 1976

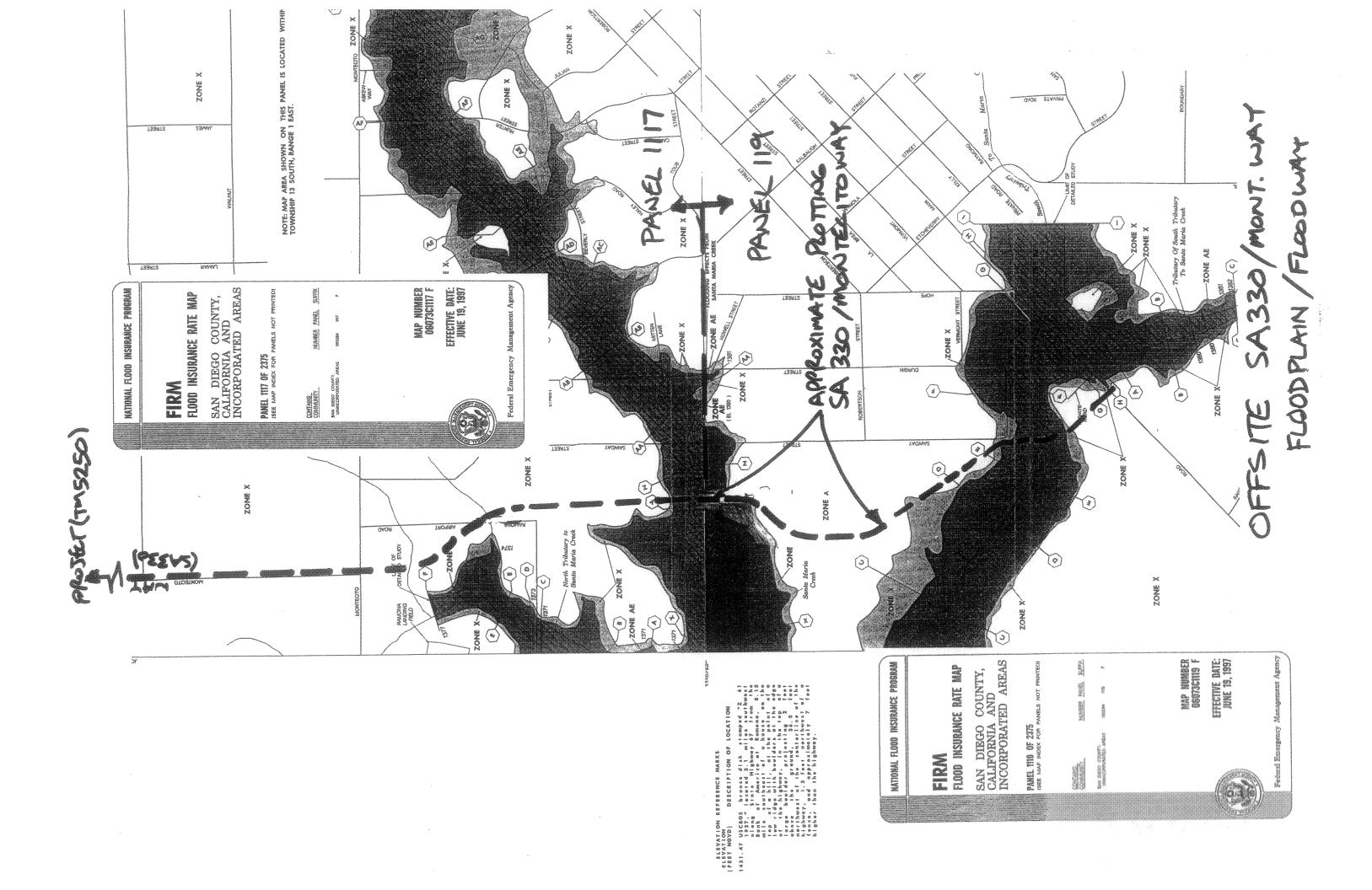
KOEBIG, INC. ENGINEERING-ARCHITECTURE-PLANNING

The recommended improvements shown in this table are for the purpose of providing a basic design for cost estimating. Environmental review and final design will be necessary before any improvements

	Priority	PP)			I			ሮ ጎ	•	S	in	S	٧
installation	(Dollars)	\$168,900			\$31,200			\$10,000	\$45,300	026.	\$24,160	\$257,000	\$.
	Recommended	Earth Ch.	* * * * * * * * * * * * * * * * * * *		Double 8' x 5'			None	Add 10' x 6' RCB	None	None	None	None
	Associated	Flooding Of Feture	Development		Overtons Road	17.00ch/2		Plooding Of Possible Future Development	Overrops Road	Adequate	Adequate	Adequate	Adequate
	992	\$ 8			\$			5,800 008,2	1.650	оделасы		\$	
Capacity CFS	Required 1	EXISTING SOLFA IN							1,040	ı	# T		189
,	Existing	Natural Drainage			550			Natural Drainage, Flood Prain Magped	2 - 8' x 6' RCB	948° 84	8' x 2' RCB	SA" RCP	60" CIP
	Leagth	(FE)	· a ·		\$	>		2.30	78			1,285	40.7
Drainage	Area	(SQ MI)			3	Š		8	3.20	define	1	0.12	<u>0</u>
		Erom Junction of	Montecio Rd. &	Paso St.		CHO Rd. & Monte	cito Way	Between Hwy. 67 & Santa Maria Crock	Main St., S.W. of Romona	Crosses Poplar St. East of Pine St.	Crosses Pamo Rd. South of Pife St.	Eleventh St. at "D" St. Northerly.	Seventh St. Between "B" St. and "D" St.
		Š.			•	٦.		v	ن م	e)	?	~	V
	Facility	Z) E			3	\$	1	~	2	-	20 204	<u></u>	8
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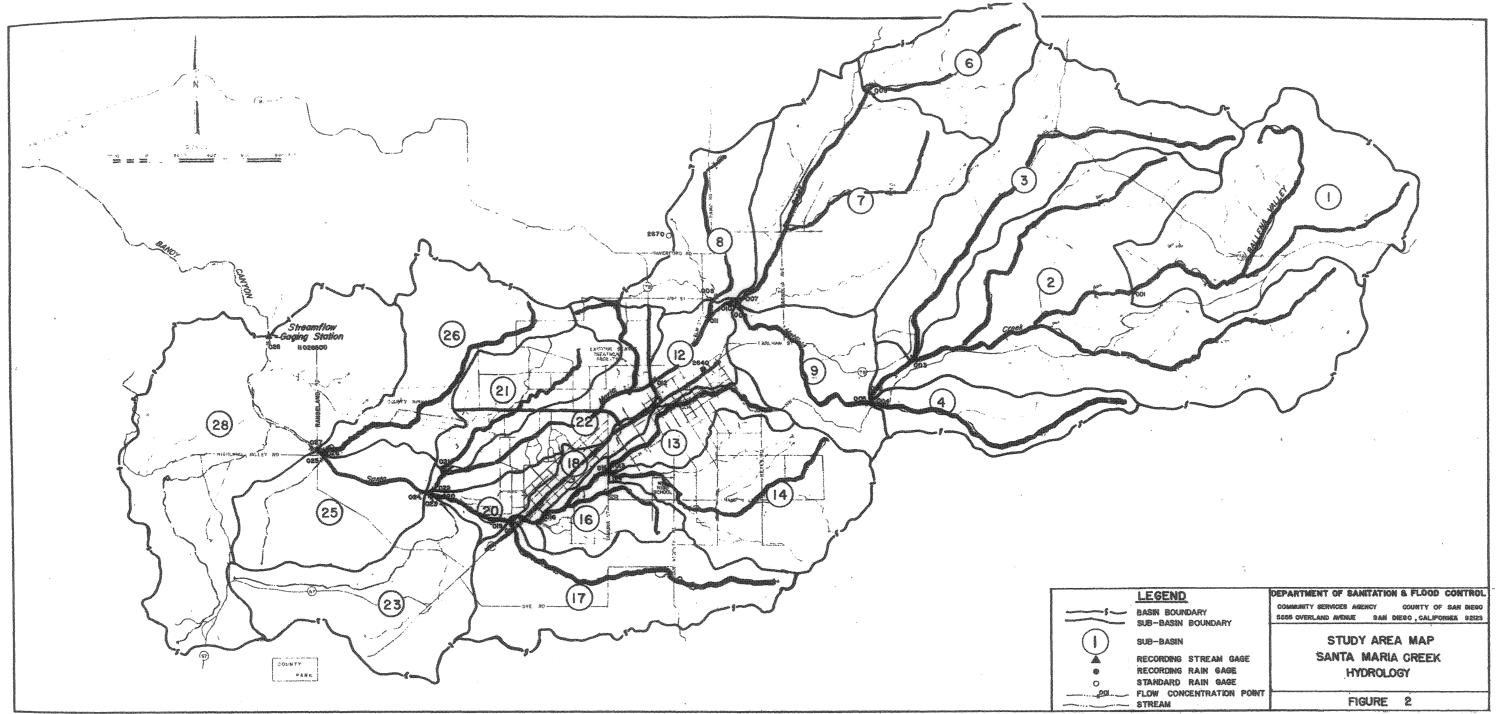


FOR
SANTA MARIA CREEK
SFC 3156
NOVEMBER 1977

DEPARTMENT OF SANITATION & FLOOD CONTROL COMMUNITY SERVICES AGENCY COUNTY OF SAN DEGO . SALIFORNIA BZ123

PEAK FLOOD FLOWS

	h		50 V	100-Year	COO V
Concen- tration	Drainage	10-Year	50-Year		500-Year
oint No.	Area Sq. Mi.	Discharge C. F. S.	Discharge C. F. S.	Discharge C. F. S.	Discharge C. F. S.
1	4.6	500	2,200	3,900	10,000
2	16.9	1,300	6,300	11,000	28,600
3	4.0	300	1,400	2,500	6,500
4	1.6	200	900	1,500	3,900
5	18.4	1,500	6,900	12,000	31,200
6	2.0	200	900	1,600	4,200
7	6.7	600	2,700	4,700	12,200
8	1.8	200	900	1,500	3,900
9	20.8	1,700	7,900	13,700	35,600
10	27.1	1,900	9,000	15,600	40,500
11	28.9	1,900	9,000	15,600	40,500
12	29.8	1,900	9,000	15,600	40,500
13	1.0	100	500	900	2,300
14	3.2	300	1,300	2,200	5,700
15	4.2	400	1,700	3,000	7,800
16	5.3	500	2,200	3,800	10,000
17	3.1	200	900	1,600	4,200
18	5.8	.400	2,100	3,600	9,400
19	8.8	700	3,400	5,800	15,000
20	9.3	700	3,400	5,800	15,000
21	1.6	100	600	1,100	2,900
22	33.1	1,900	9,200	15,600	42,000
23	2.9	200	800	1,400	3,600
24	45.3	2,100	10,000	17,300	45,000
25	2.5	200	, 900	1,500	3,900
26	2.6	200	900	1,500	3,900
27	50.3	2,100	10,000	17,300	45,000
28	56.9	2,100	10,000	17,300	45,000



SA 330 EXTENSION:

STORM WATER MANAGEMENT INFORMATION

PROJECT DESCRIPTION

Montecito Ranch is a proposed single-family residential subdivision in the community of Ramona, County of San Diego, California (proposed Tract 5250). The Project is bound by the Rancho Santa Maria line which is the north-west boundary of the project, Highway 78, the north boundary and the remainder of the project is generally west of Pine Street and north of Montecito Road. The project contains **935 acres** and is generally a portion of Sections 5,7,8,9, and 17, Township 13 South, Range 1 East. The "Weekend Villas" subdivision exists to the North directly across Highway 78 and Ramona Airport is south of the project. The proposed subdivision will contain 434 lots: 417 single-family residential lots (20,000 square-foot minimum in size), a school site, 13 lots which include uses for open space and drainage and infrastructure requirements, a park, a historic park site, and a wastewater facility. Park and school permanent post-construction BMPs shall be required and are to be determined by proposed developments/developers at the building permit stage. The project will be developed in two map units.

The rural type lots have a developed foot print which minimizes disturbance to the natural environment, as well as minimizing the impervious surface area, by consolidating graded areas and building areas at the extreme front of each lot adjacent to the public street. Public access to open space will be provided through the incorporation of trail systems.

Offsite roadway mitigation and support of County routes has yielded the development of SA330 (Montecito Way) from the project boundary south to Montecito Road and continuing south to Highway 67 (Main Street). See Attachment D, "Treatment BMP Location Map".

Table A Land Use by Planning Area

<u>Table A</u> summarizes land use by unit on an acreage basis. Off-site improvements conditioned to this tentative map occur within existing public right-of way.

PLANNING AREA	NO. OF LOTS	NO. OF RESIDENTIAL LOTS	RESIDENTIAL DEVELOPMENT AREA ¹ (AC)	STREET DEDICATION ⁵ (AC)	HOA LOTS ⁶ (AC)	DEDICATED OPEN SPACE ⁴ (AC)	PARK SITE ¹ (AC)	CHARTER SCHOOL SITE 1 (AC)	HISTORICAL PARK SITE ¹ (AC)	WASTEWATER FACILITY	TRAILS (INSIDE ROADWAY) (LF)
UNIT 1	249.00	243.00	142.1	21.5	6.4					-	
UNIT 2	185.00	174.00	108.1	17.7	5.7	-					
WITHIN PROJ. BDRY. 2				23.6		554.0	8.3	10.6	11.9	25.4	11243.5
TOTAL	434.00	417.00	250.2	62.7	12.1	554.0	8.3	10.6	11.9	25.4	11243.5
PERCENT IMPERVIOUS 3			20%	95%	0%	N/A	10%	80%	NO CHANGE	2%	
PERCENT OF SITE CONVERTED TO IMPERVIOUS			5.4%	6.4%	0.0%		0.0%	0.0%		0.0%	

NOTES:

PRIORITY PROJECT DETERMINATION

Please check the box that best describes the project. Does the project meet one of the following criteria?

PRIORITY PROJECT	YES	NO
Redevelopment within the County Urban Area that creates or adds at least 5,000		X
net square feet of additional impervious surface area		

¹ INCLUDES BRUSH MANAGEMENT AREA (29.52 AC. IN UNIT 1, 29.38 AC. IN UNIT 2, & 10.16 AC. WITHIN PROJ. BDRY., TOTAL = 69.06 AC.); DOES NOT INCULDE PRIVATE ROAD EASEMENTS

² INCLUDES ROADWAY DEDICATIONS WITHIN LOTS 429 & 430 AND MONTECITO RANCH ROAD WITHIN THIS ROW, TO BE CONSTRUCTED INDEPENDENTLY OF UNIT 1 AND UNIT 2

³ PERCENT IMPERVIOUS BASE UPON, "SAN DIEGO COUNTY HYDROLOGY MANUAL, DPW FLOOD CONTROL SECTION: JUNE 2003"

⁴ INCLUDES TRAILS PASSING THROUGH OPEN SPACE

⁵ INCLUDES PRIVATE ROAD EASEMENTS WITHIN RESIDENTIAL DEVELOPMENT

⁶ INCLINDES HOA MAINTENANCE LOTS, LOTS 79 & 322 USED FOR PRIVATE DETENTION BASINS, AND LOT 294 USED FOR A PUBLIC SEWER PUMP STATION

E-2 Curb Inlet Filtration (CLEARWATER)

Clearwater Curb Inlet Filtration Units will be utilized to treat runoff from public and private right-of-ways. These units have been approved by the County of San Diego as an acceptable filtration BMP. The Clearwater units treat "first flush" $(Q_{\rm ff})$ minor storms and allow bypass of the filter for large storm events. The Clearwater filtration system consists of three separate screens that filter out large debris and trash, three chambers that settle out suspended solids, a suspended adsorbent boom to remove oil and petroleum products in the first chamber, and a media filter as the final step in the treatment train, used to remove smaller particulates and dissolved metals. Laboratory testing has shown that the Clearwater units provide removal rates of 97% for total suspended solids (TSS), 86% for oil and grease, 81% for lead, and 83% for zinc. These units will remove pollutants to the MEP, prior to release to the natural bio-swales within open space areas. Refer to the end of this section for product specifications.

- Design Criteria: Clearwater units, identified on the BMP map within Attachment D, will treat runoff generated from drainage roadway basins.
- a) Manufacture's Specifications for the Clearwater units show a filtration capacity of 0.46 cfs. See specification at the end of this section.
- b) Based upon County of San Diego, Storm Water Standards, flow based BMPs are required to treat the first 0.2in/hr of runoff. Therefore, these units can treat flows from tributary areas up to 2.42 acres (A = Q_{ff}/(I*C) = 0.46 cfs/(0.2in/hr)(0.95) = 2.42 Acres). 34 Clearwater units will be utilized to treat runoff from approximately 42 acres of roadway basin, resulting in an average of 1.24 acres/unit. Therefore, Clearwater units have the ability to treat all roadway runoff with excess capacity.
- c) Manufacture criteria are presented at the end of this section documenting removal levels and specific water control device information.

<u>Appropriate Applications and Siting Constraints:</u> There are no unique siting criteria. The Clearwater Curb Inlet Filtration units can be installed in any standard sized curb inlet.

<u>Vector Control</u>: As indicated in the attached manufacturer's information, vector control is not a problem with the Clearwater units. The unit has been designed to slowly drain out the bottom so no standing water remains after a storm event.

F-6 BMP's Maintenance Annual Cost Estimate:

A detailed cost estimate of the Post-Construction Structural BMP Maintenance will be developed during the Grading Plan and Improvement Plan Engineering. Since the project is in the preliminary development phase Sections F-4A through F-4C are only an initial estimate.

F-6A Detention Basin (DB)

Maintenance components include:

- a) DB Inspection, detailed in Section F-1 and summarized as: once a month, after every large storm, on a weekly basis during extended periods of wet weather.
- b) Mowing, Trash and Debris, Sediment Removal, Mechanical Components, Elimination of Mosquito Breeding Habitats.

Initial consultation with Environmental Maintenance Service Company D & D Landscape (619) 287-9311, incorporating items a & b above, annual service is estimated between \$300.00 to \$500.00 per acre of detention facility; currently the project proposes approximately ten acres for DBs.

ESTIMATED ANNUAL COST: \$ 5,000.00 (initial estimate only, final cost to be determined at time of construction)

F-6B Curb Inlet Filtration Units (CLEARWATER)

Maintenance components include:

- a) CLEARWATER Inspection, detailed in Section F-2, and summarized as: after every runoff event in the first 90 days, every 60 days during rainfall season, and once at the end of rainfall season.
- b) Replacement of oil adsorbent boom and media filter at least twice a year.

Maintenance costs have been estimated utilizing County Appendix H Estimated O & M Costs for BMP Projects, cost for Inlet Inserts – Fossil Filter.

ESTIMATED ANNUAL COST: \$ 41,419.00 [35 Clearwater units utilized ~ \$1,183.40/unit] (initial estimate only, final cost to be determined at time of construction)

F-6C Curb Inlet Inserts (BIOCLEAN)

Maintenance components include:

- a) BIOCLEAN Inspection, detailed in Section F-3, and summarized as: quarterly, after every large storm, on a weekly basis during extended periods of wet weather.
- b) Annual replacement of oil adsorbent boom.

Maintenance costs have been estimated utilizing County Appendix H Estimated O & M Costs for BMP Projects, cost for Inlet Inserts – Fossil Filter.

ESTIMATED ANNUAL COST: \$ 47,336.00 [40 filters utilized ~ \$1,183.40/filter] (initial estimate only, final cost to be determined at time of construction)

F-6D Hydrodynamic Separator (VORTSENTRY)

Maintenance components include:

- c) VORTSENTRY Inspection, detailed in Section F-4, and summarized as: quarterly, after every large storm, on a weekly basis during extended periods of wet weather.
- d) Removal of accumulated sediment.

Maintenance costs have been estimated utilizing County Appendix H Estimated O & M Costs for BMP Projects, cost for Media Filter – Sand without Pump.

ESTIMATED ANNUAL COST: \$ 27,265.80 [6 units utilized ~ \$4,544.30/unit] (initial estimate only, final cost to be determined at time of construction)

F-6E Bio-Filters

ESTIMATED ANNUAL COST: No Annual Cost is anticipated; outside normal Grounds Maintenance. The majority of Bio-Filtration will be occurring on the single-family lots prior to capture by the Public Storm Drain System, down stream of the outlet structure of the DBs (post treatment), and down stream of the detention basins; outside the developed areas and outside project lands requiring resource protection. As such no maintenance will be required.

The ClearWater BMP Curb Inlet Filter

The ClearWater BMP is a powerful advancement in sidewalk curb inlet filtration technology. The

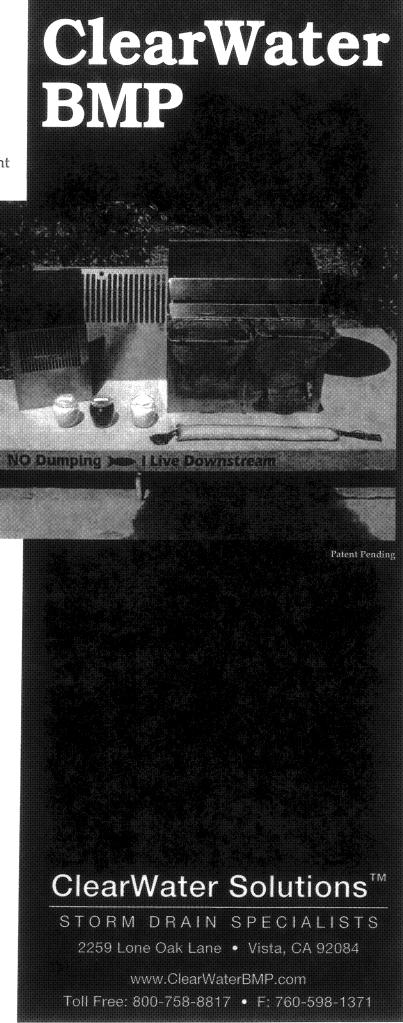
patent-pending, filter train design allows stormwater flows to be screened, settled, and then filtered, all within the confines of an existing curb inlet drain box. This aggressive filtration design significantly reduces concentrations of trash, sediment, hydrocarbons, metals, and nutrients. Specifically designed for retrofitting within the existing curb and gutter infrastructure, it handles heavy storm flows with ease, dryweather flows expertly, utilizes mosquito free technology and requires no excavation or concrete modification. The ClearWater BMP truly is your curb inlet pollution solution.

Features

- Fits into existing curb inlets
- Non-scouring
- Large storage capacity
- Easy street level maintenance
- No clogging under heavy flows
- Durable stainless steel construction
- Affordable

Benefits

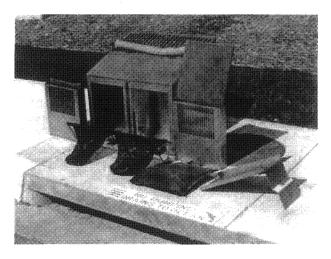
- Improves downstream water quality
- High removal rate of Total Suspended Solids – 97%
- Located close to pollutant sources
- Reduces concentrations of trash, sediment, hydrocarbons, metals and nutrients
- NPDES Compliant now and in the future

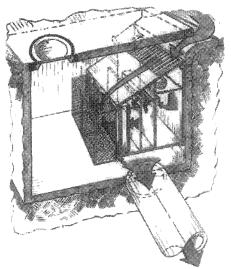


System Operation

The ClearWater BMP is a powerful advancement in sidewalk curb inlet filtration technology. Specifically designed for retrofitting under the sidewalk within the curb and gutter system, it handles heavy storm flows with ease, utilizes mosquito free technology, and requires no excavation or concrete modification.

The revolutionary design of the ClearWater BMP allows storm water to be screened three times, settled three times, make constant surface contact with an oil and grease separator, pass through a synthetic mesh filter, and finally pass through a column of porous media comprised of natural zeolites, perlite, and activated carbon. Filter media can be tailored to site specific needs. These media and the unique engineering design of the filter support containing them, enhances removal of smaller particulates, thus improving the quality of life downstream.





Performance Testing

Using the "typical" storm water calculations of 0.2 inches (3,780 gallons) of rain per hour for an ordinary curb inlet, the ClearWater BMP performed very well. Proven testing from San Diego State University shows the ClearWater BMP has removal rates of 97% for total suspended solids (TSS), 86% for oil and grease (O & G), 81% for lead (Pb), and 83% for zinc (Zn). Satisfactory rates of removal were accomplished with heavy metals in solution, a claim that will not be found in most competitors literature since most only clean out larger settled constituents, while the finer materials flow downstream contaminating wildlife and beaches.

Removal with Mixed-Media Filter at 64 GPM

	"Typical" % Removal with ClearWater BMP
TSS: Total Suspended Solids	97
O&G: Oil & Grease	86
Pb: Lead	81
Zn: Zinc	83

What is your NPDES compliance criteria?

ClearWater BMP Treatment Capacity					
Rainfall Intensity, Inches/Hr.	0.20	0.25	0.50	0.75	1.0
R.O.W. Treatment Capacity, Acres	2.5	2.0	1.0	0.67	0.50

200 GPM (.46 CFS) before bypassing occurs.





County of San Diego

DEPARTMENT OF PUBLIC WORKS

JOHN L. SNYDER DIRECTOR

5555 OVERLAND AVE, SUITE 2188 SAN DIEGO, CALIFORNIA 92123-1295 (858) 694-2212 FAX: (858) 268-0461 Web Site: sdcdpw.org

November 28, 2005

Stewart McClure Clearwater Solutions, Inc. 2259 Lone Oak Lane Vista, Ca 92084

Dear Mr. McClure:

CLEARWATER SOLUTION FOR USE IN THE COUNTY OF SAN DIEGO

The County of San Diego (County) has reviewed your inquiry regarding the approval of ClearWater Solution™ Best Management Practice (BMP) for use in the County of San Diego.

Since the County regulates the use of structural treatment control BMPs only in the unincorporated portions of the County, this response has no applicability to projects located within incorporated cities in the County. Furthermore, the County does not endorse this product.

After reviewing the information provided to the County, ClearWater Solution™ BMP shall be accepted for use as a structural treatment BMP under the category of filtration system. This decision is based on test results from San Diego State University.

Thank you for informing the County about your product. If you have any questions or need additional information, please contact Cid Tesoro, Flood Control Engineer, at (858) 694-3672, or e-mail at Cid.Tesoro@sdcounty.ca.gov.

Sincerely.

CHANDRA L. WALLAR

Assistant Director

cc: Cid Tesoro (O326)



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SDSU Test Data The ClearWater BMP

Performance Testing of CLEARWATER SOLUTIONS, Inc. Storm Water Treatment Prototype "The ClearWater BMP"

November 25, 2003

SAN DIEGO STATE University

Mirat Gurol, Ph.D.

Greg Loraine, Ph.D.

Dept. of Civil and Environmental Engineering

San Diego State University Summary A prototype of the CLEARWATER SOLUTIONS, INC. ClearWater BMP storm water retrofit filter was tested at the Environmental Engineering Laboratories at San Diego State University. The prototype was ¼ size of the full unit, but was tested at hydraulic retention times typical of precipitation events in southern California.

Two series of tests were run using two different synthetic storm water. The first tests were run using "Typical" storm water, which exhibited characteristics of real storm water, containing suspended solids in a wide size range, floating oil, and typical concentrations of dissolved metals. The prototype performed very well in these initial tests, so additional tests were done with a "Worst-case" storm water. The "Worst-case" storm water had primarily very fine suspended solids, emulsified oil, dissolved phosphorous, and high concentrations of dissolved and particulate metals. Total Suspended Solids (TSS) removal efficiency was determined at four flow rates. Empirical equations for removal of different size fractions were developed. The removal efficiencies for oil and grease, total phosphorous, copper, lead, and zinc, were measured at two flow rates. The effectiveness of the perlitezeolite-activated carbon filter (media filter) was also tested. Using the "Typical" storm water calculations at 0.2 inches (3,780 gallons) of rain per hour for an ordinary curb inlet, the ClearWater BMP performed very well. The unit achieved 97% removal of TSS (the EPA standard for Nonpoint Source Pollution in Coastal waters is 80% removal of TSS). Floatable oil and grease was removed with an efficiency of 86% (100% at 16gpm). Zinc was removed at the rate of 83%. Copper came in at 28% (52% at 16gpm). And, lead removal was at 81%. The mixed media filter did not improve TSS removal but did substantially enhance removal of oil and grease, and dissolved metals.

Table 10 compares the removal efficiency of the unit with and without the mixed media filter at flow rates equivalent to 64 gpm in the full size unit. The presence of the filter did not significantly increase TSS removal, even for the small size particles. However, the filter was able to capture emulsified O&G droplets that the oil sock missed. This indicates that adsorption to activated carbon present in the filter is an important removal mechanism for O&G removal. The most dramatic effect of the filter was seen in the removal of dissolved metals. In the "typical" storm water scenario where most of the particle associated metals were attached to fairly large particles, the effectiveness of the filter was not as apparent due to pre-settling. In the "worst-case" storm water scenario, where the metals were either soluble or attached to fine particles, no removal of the metals was achieved without the filter. The filter captured 56% of Zn, 33% Cu, and 14% of Pb. This indicates that the media filter is required to capture any dissolved metals. Table 10: Removal With and Without Mixed Media Filter at 64 gpm. *Click here to contact us for the entire report.

CLEARWATER SOLUTIONS, INC. ClearWater BMP storm water filter Preformance Test Table 10: Removal With and Without Mixed Media Filter at 64gpm.							
	"Typical" % Removal Filtered	"Typical" % Removal No Filter	"Worst-case" % Removal Filtered	"Worst-case" % Removal No Filter			
TSS	97	96	65	64			
0&G	86	78	38	0			
Cu	28	49	33	0			
Pb	81	78	14	0			
Zn	83	85	56	0			

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CLEARWATER



CLEARWATER SOLUTIONS®, INC 2259 Lone Oak Lane Vista, CA 92084 800-758-8817

"NPDES compliant now and in the future!"

MAINTENANCE GUIDELINES For the ClearWater UNIT

INTRODUCTION

The ClearWater BMP unit is an important and effective component of your storm water management program and proper operation and maintenance of the unit is essential to demonstrate your compliance with local, state, and federal water pollution control requirements.

This is a patent-pending multi-media filtration design combined with pre-settling sedimentation containment and over flow by-pass protection. Water flow enters the unit and is directed into a pre-settling sedimentation chamber that collects heavy sediments and debris passing through the cover. Large trash and debris flow over the top into mesh trash baskets. The second and third sedimentation chamber is entered by the water flow to further settle lighter materials. The cleaner water then encounters the media filters. The media is a special blend of Perlite, Zeolite, and Activated Carbon that filters out a variety of organics, metals, and other contaminants from the runoff. Water then passes through the front of the treatment chamber into the catch basin. A properly maintained unit will achieve substantial reductions of contaminants from entering surface waters. To accomplish this, the filtration chamber is designed to handle 200 gpm through the media chamber, effectively handling up to 1" of rain per hour in a properly designed drain. Units strategically placed downstream from "hot spots" such as gas stations, parking lots and other industrial/commercial sites containing higher contaminate loadings, give municipalities and businesses an effective tool for reducing pollutants.

ClearWater BMP CLEANOUT

The frequency of cleaning the ClearWater BMP unit will depend upon the generation of trash and debris and sediments in your application. Cleanout and preventive maintenance schedules will be determined based on operating experience unless precise pollutant loadings have been determined. The unit should be periodically inspected to determine the amount of accumulated pollutants and to ensure that the cleanout frequency is adequate to handle the predicted pollutant load being processed by the ClearWater BMP unit. Cleanouts have been averaging two times per year in Southern California.

NEW INSTALLATIONS

Check the condition of the unit after every runoff event for the first 90 days. The visual inspection should ascertain that the unit is functioning properly (no blockages or obstructions to inlet), measuring the amount of solid materials that have accumulated in the trash collection nets and the amount of fine sediment accumulated in the settling areas. Schedules for inspections and cleanout should be based on storm events and pollutant accumulation.

ONGOING OPERATION

During the rainfall season, the unit should be inspected at least once every 60 days. The floatables should be removed and the settling areas cleaned when the primary settling chamber is 40%-50% full. If floatables accumulate more rapidly than the settleable solids, the floatables could be removed using a vactor truck. The trash baskets may need to be emptied more often, depending on the accumulation of larger trash and debris.

Cleanout of the ClearWater BMP unit at the end of a rainfall season is recommended because of the nature of pollutants collected and the potential for odor generation from the decomposition of material being collected and retained.

USE OF SORBENTS

The addition of sorbents is a unique enhancement capability special to ClearWater BMP units, enabling increased oil and grease capture efficiencies beyond that obtainable by conventional oil baffle systems.

RECOMMENDED OIL SORBENTS

The sorbent sock material should be replaced when it is fully discolored and hard from absorbing hydrocarbons. The sorbent may require disposal as a special or hazardous waste, but will depend on local and state regulatory requirements.

CLEANOUT AND DISPOSAL

A vactor truck is recommended for cleanout of the ClearWater BMP unit and can be easily accomplished in less than 15 minutes for most installations. Standard vactor operations should be employed in the cleanout of the ClearWater BMP unit. Disposal of material from the ClearWater BMP unit should be in accordance with the local municipality's requirements. Disposal of the decant material to a POTW is recommended. Field decanting to the storm drainage system is not recommended. Solids can be disposed of in a similar fashion as those materials collected from street sweeping operations and catch-basin cleanouts.

CONFINED SPACE

The ClearWater BMP unit is in a confined space environment and only properly trained personnel possessing the necessary safety equipment should enter the unit to perform maintenance or inspection procedures. Inspections of the components and maintenance procedures can, in most cases, be accomplished without confined space entry, through manhole access or directly through the curb inlet.

RECORDS OF INSTALLATION AND MAINTENANCE

CLEARWATER SOLUTIONS, INC. recommends that the owner maintain annual records of the operation and maintenance of the ClearWater BMP unit to document the effective maintenance of this important component of your storm water management program. The Installation and Maintenance Record form is suggested and should be retained for a minimum period of three years.

